

## Open source makeover

The popular GNU General Public License is set for a major overhaul — its first since 1991. **PAGE 10.**

## Face-Off: Assessing security

Is penetration testing better than vulnerability scanning? Paul Paget of Core Security says yes. Ron Gula of Tenable Network Security says no. **PAGE 44.**

## The SOA treatment

Vendors such as BEA, IBM and Oracle are trying to ease software development by outfitting application servers with service-oriented architecture features. **PAGE 38.**

# NETWORKWORLD

The leader in network knowledge ■ [www.networkworld.com](http://www.networkworld.com)

December 5, 2005 ■ Volume 22, Number 48

## WiderNet

### ‘Reverse engineering’

IT shops finding buyers for their in-house software.

BY ANN BEDNARZ

**L**ike many of the largest companies, Merrill Lynch can't always buy the IT tools it wants. Sometimes they just don't exist. That's why four years ago the financial services firm started building its own software to expose mainframe resources to other applications via Web services.

The firm went the homegrown route after unsuccessfully searching for a packaged product that met its needs, says Andy Brown, chief technology architect. Nothing surfaced at the time

**See Merrill Lynch, page 14**



DAN VASCONCELLOS

## Web app firewalls take on more heat

BY TIM GREENE

Over the next few months Web application firewall vendors Citrix, F5 Networks, Imperva, NetContinuum and Protegrity will add features that let their products take on bigger roles in speeding traffic to server farms and better protecting networked corporate data.

While traditional firewalls have blocked packets effectively at Layer 3 for years, they are proving ineffective against attacks that prey on application weaknesses. Web application firewalls detect application anomalies and whether sensitive data — such as credit card and Social Security numbers — is being tapped and

can block or mask it.

Many businesses with Web applications get along without Web application firewalls, says Rob Whiteley, an analyst with Forrester Research. Most protect the traffic with SSL encryption, and some use SSL VPNs to make sure authorized people are con-

necting to the Web applications.

But high-stakes financial services businesses, for instance, often turn to these devices, Whiteley says. “Application firewalls are for those who cannot afford to have anything go wrong. It's not like you're leaving a gaping hole by not having an application firewall,” he says. “It's just giving yourself an extra measure of protection.”

Web application firewalls are being integrated with load balancers and application switches that ensure the availability of Web applications to create products that address accessibility and

**See Firewalls, page 16**

We tested Juniper's new gateway, which combines firewall, VPN and IPS. **Page 56.**

**NETWORKWORLD**  
**CLEAR CHOICE**



## Automation: Better but not yet automatic

BY DENISE DUBIE

Automation has come a long way since the days of running batch jobs on mainframes, but given the complexity of today's distributed networks, the technology still has plenty of growing up to do, experts say.

Network managers today can

use automation in innovative ways to reduce costs and labor, and to speed problem resolution when performance degrades or failures occur. Systems management heavyweights IBM and HP have been adding automation to their product suites in an effort to entice customers into supporting

their utility computing product road maps.

For example, IBM this week is scheduled to introduce several products within its Tivoli software division designed to lessen the need for manual intervention when monitoring cross-platform systems, applications and service-oriented architectures. The company also plans to ship later this month the second generation of a virtualization package that includes software to automatically provision systems and manage workloads across pools of network, server and storage resources. Separately, HP is set to release software that automatically

**See Automation, page 68**

## Under pressure

Inside the high-stress life of AT&T Chief Information Security Officer Ed Amoroso.



**Page 48**

STEVEN VOTE



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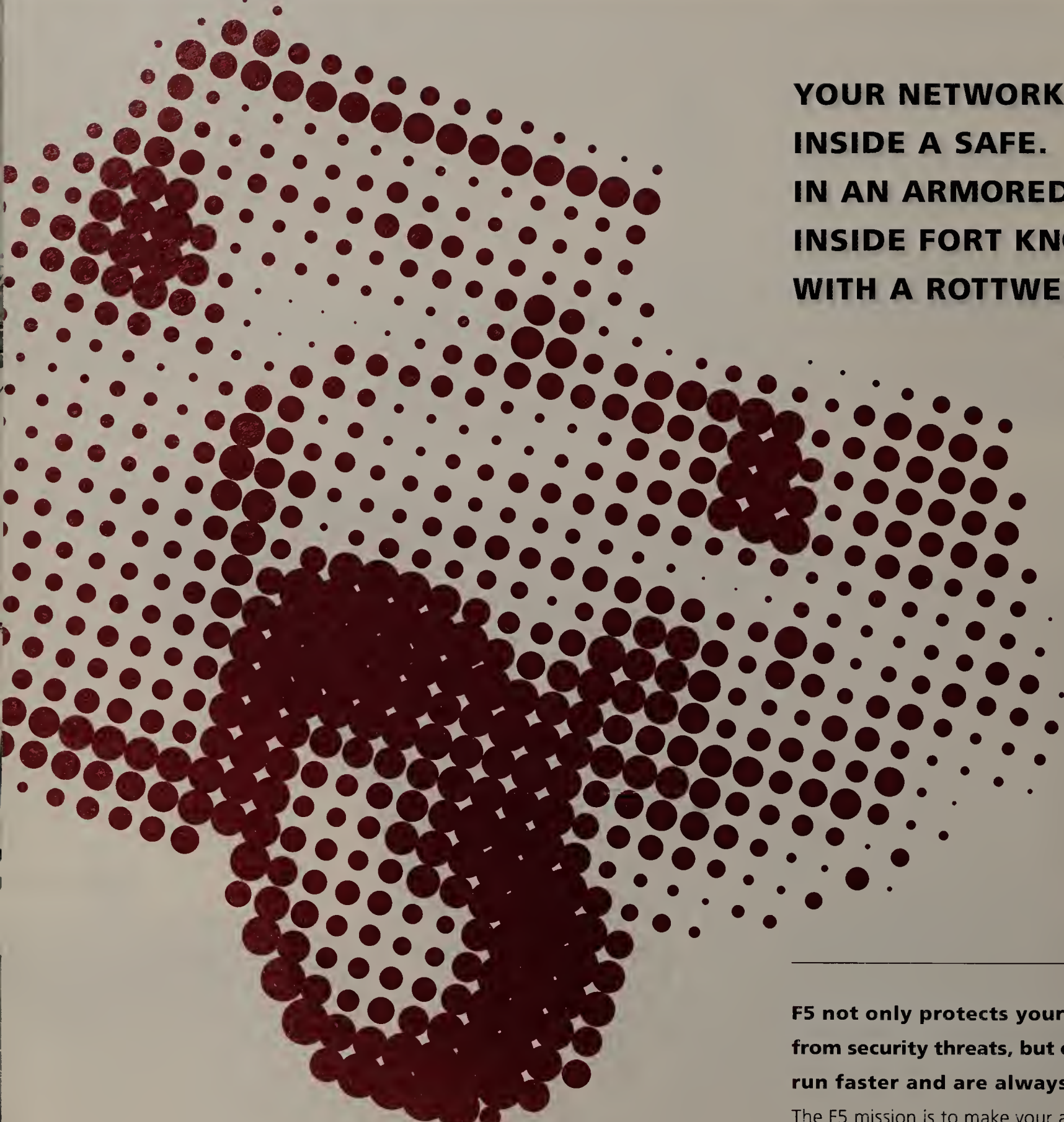


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# 12.5.05 NETWORKWORLD

## News

- 8** Users urge **BlackBerry** maker to settle lawsuit.
- 8** **Wireless laptops** get new defense.
- 10** **Conference** highlights networking goals for '06.
- 10** Sun shipping eight-core **Niagara servers**.
- 10** **Open source GPL** to get revision.
- 12** **Windows management** service debuts.
- 12** Vendors tackle **SOA management, security**.
- 16** HP builds **management dashboard**.
- 20** **Anti-offshoring legislation** heats up.
- 20** **HP** bolsters utility services.

### Net Infrastructure

- 23** Vendors mix voice, mobile tools.
- 23** Check Point offers security appliances.
- 26** **Kevin Tolly**: The need for (enough) speed.
- 26** Northrup Grumman to deliver IP conferencing network to DoD.

### Enterprise Computing

- 29** Open source firm to challenge VMware.
- 29** Nokia pushes harder for enterprise mobility.
- 30** Cerf backs broader Google focus.

### Application Services

- 33** Mirapoint bolsters messaging server.
- 33** Microsoft partner offers collaboration.
- 34** **Scott Bradner**: Pity the poor telephone company?
- 34** Sun expands menu of free software.
- 38** **SPECIAL FOCUS**: Application servers get SOA treatment.

### Service Providers

- 39** **Johna Till Johnson**: Carriers have a content conundrum.
- 39** Cingular, Orange team on cellular service.
- 39** Microsoft upgrades hosted service suite.

### Technology Update

- 40** SAML 2.0 simplifies federation.
- 40** **Steve Blass**: Ask Dr. Internet.
- 42** **Mark Gibbs**: The insanely cool VMware player.
- 42** **Keith Shaw**: Cool tools, gizmos and other neat stuff.

### Opinions

- 46** **On Technology**: When IT, politics in Massachusetts collide.
- 47** **Daniel Minoli**: ZigBee: What's in it for you?
- 47** **Howard Anderson**: Game over, start new game.
- 70** **BackSpin**: Putting lipstick on the Internet porno-pig.
- 70** **Net Buzz**: You say you can smell phish in your in-box?

### Management Strategies

- 61** **IT leaders go public**: Seeking challenge, some go to government work from private sector.



ILLUSTRATION KERRY KOZACZUK

## Under pressure

Inside the high-stress life of AT&T Chief Information Security Officer Ed Amoroso.

Page 48.

## NETWORKWORLD CLEAR CHOICE

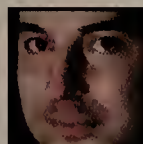
Juniper Networks' new chassis combines firewall, VPN and IPS. **Page 56.**



■ **Juniper's Integrated Security Gateway 2000** is a firewall/VPN with space for three additional security blades.

## Face-Off:

Is penetration testing more effective than vulnerability scanning? Paul Paget of Core Security Technologies says yes. Ron Gula of Tenable Network Security says no. **Page 44.**



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#### Network World ITVideo

The Hot Seat with John Gallant: Security start-up Bit9 protects enterprise systems by blocking unwanted software on the desktop and server. John Hanratty, Bit9's co-founder, gets in the Hot Seat to explain his company's approach to security. **DocFinder: 1133**

#### Cool Tools: Best tech holiday gifts

With a little inspiration from a classic game show, Editor Keith Shaw highlights gifts from our annual Cool Yule Tools Holiday Gift Guide that are sure to please your friends, family or yourself. **DocFinder: 9951**

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We've reviewed more than 100 high-

tech products for the home and office you'll want to give to your friends, family or yourself.

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#### Network World Podcast: The SANS top 20 vulnerabilities

Rohit Dhamankar, project manager for the SANS Top 20, discusses what's new on the list and who is exploiting these security vulnerabilities. **DocFinder: 1134**

#### Network World Radio: ICE

Cisco's Cullen Jennings explains how the up-and-coming VoIP standard Interactive Connectivity Establishment works and what its killer application might be — and it's not straight VoIP. **DocFinder: 1135**

### Online help and advice

#### Branch Office Best Practices

In our new weekly column, Robin Gareiss details why you need specific, measurable action plans for handling the IT needs of your branch offices and how you can start. **DocFinder: 1136**

#### Home Base

Technology Editor Sandra Gittlen looks at the IT overhaul one Chicago firm got from CDW, Intel, Lenovo and Linksys. **DocFinder: 1137**

#### Small Business Tech

Columnist James Gaskin looks at MioNet, which combines file sharing and remote desktop control. **DocFinder: 1138**

#### IT Borderlands

Columnist Ken Fasimpaur runs across a vendor support site that really seems to want user feedback. He ponders the miracle this is and wonders what good vendor or e-commerce sites you've seen. **DocFinder: 9984**

### Seminars and events

#### Free event for IT executives

What do industry insiders predict for the coming year? Find out at IT Roadmap '06: What's New, What's Next, and What to Buy Now. John Gallant and Johna Till Johnson provide concrete answers to the questions that plague executives responsible for IT spending. Qualify to attend free — and the opportunity to win a 42-inch plasma TV when you attend. **DocFinder: 1139**

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# NEWSbits

## Cisco IOS security hole surfaces

■ Security researchers last week said they discovered a hole in the Web-server code in Cisco's IOS software. The vulnerability, as reported by the security organizations Secunia and SecurityFocus, could let a potential attacker view a memory dump of an IOS router via the HTTP server and inject script code into the router through the server. The vulnerability affects only Cisco routers running IOS HTTP servers, which are used as an alternative management interface to the text-based command line for configuring routers. Cisco said it was investigating the issue.

## More execs leave Nortel

■ Nortel's shake-up continues. The company has dismissed two senior-level executives two weeks after a new CEO took up the reins of the troubled company. Brian McFadden, a 28-year Nortel veteran, and Sue Spradley, who had been at the company 18 years, left the telecom vendor early last week. McFadden had been chief research officer, and Spradley president of global services and operations. Nortel gave no reason for their departures. McFadden and Spradley follow ex-CEO Bill Owens and Enterprise Division President Malcolm Collins out the door. Nortel recently announced that Owens would be replaced by former Motorola COO Mike Zafirovski. Owens' departure came five months after two ex-Cisco executives whom Nortel had tapped to be COO and CTO left the company after three months, following disputes with Owens. Owens is credited with getting Nortel back on track after an accounting scandal forced the company to restate years of financial results.

## Hackers publish Windows attacks

■ Hackers have given network professionals more reasons to update users' Windows PCs: samples of software that could be used to attack an unpatched Windows system. The latest examples, posted to the French Security Incident Response Team Web site, take advantage of the same two flaws that were

exploited  
 {quote of the week}  
 {quote of the week}  
 {quote of the week}

"The result is that we are taught, yet again, that if you want to get a vendor's attention to a flaw in their product, you need to create an exploit and publish it. Just telling them is not sufficient."

*Russ Cooper, editor of the NTBugtraq newslist and a scientist with security vendor Cybertrust, referring to a flaw in Microsoft's browser.*

See story at [www.networkworld.com](http://www.networkworld.com), DocFinder: 1147.

earlier in the week. One of these attacks, which can be used to crash a system, exploits a critical vulnerability in the way that Windows processes files saved in the Windows Metafile graphics format. Microsoft fixed this Metafile bug in its MS05-053 Security Update, released Nov. 8, so only customers who have not yet applied this patch are at risk from this new attack. The second attack targets a flaw in the Microsoft Distributed Transaction Coordinator (MSDTC), which was patched in October's MS05-051 Security Update. The MSDTC is a component of the operating system that is commonly used by database software to help manage transactions.

## City to create wireless-mesh net

■ New Orleans officials last week announced an expansion of the city's existing wireless-mesh network, which supports a system of police surveillance cameras. Using \$1 million in donated equipment and software from Tropos, Pronto and Intel, the expanded mesh will eventually blanket the city, supporting a secure net for police and other city employees and

## TheGoodTheBadTheUgly

< **Retailers pass the test.** Web performance watcher Keynote says major retail Web sites barely flinched despite a big increase in traffic last week on Cyber Monday, a term used to refer to the first big online shopping day of the holiday season. The average time for completing a search-and-buy transaction was about 14 seconds, which Keynote Senior Internet Analyst Roopak Patel describes as "well within the tolerance for acceptability."

**Wireless providers need work.** Only one in eight wireless customers considers their carrier's customer service excellent, according to a new report from market watcher In-Stat. On the bright side, service providers have made some progress reducing customer churn and complaint rates.

**Here comes Eliot.** You knew it couldn't be long before the Sony CD spyware controversy got the attention of Eliot Spitzer, attorney general for the state of New York. Spitzer, who has gone after everyone from hackers to Wall Street honchos, began looking into Sony's use of the XCP (extended copy protection) software over the past couple of weeks, said Brad Maione, a spokesman for Spitzer's office. Maione declined to say whether or not his office was planning legal action against Sony, which was recently sued by Texas Attorney General Greg Abbott, who accused the company of violating his state's 2005 anti-spyware law.

offering free Internet access to all residents who have a computer with a wireless card. Its bandwidth will be 512K bit/sec as long as the city remains under a state of emergency. But bandwidth will drop to 128K bit/sec afterward, to comply with a state law restricting municipal broadband nets.

## Iron Mountain buys LiveVault

■ Data-protection company Iron Mountain last week announced it is buying LiveVault, a provider of online server back-up and recovery services. The companies know each other well. Iron Mountain has been an investor in LiveVault since 2000 and owns nearly 14% of the company. Iron Mountain will pay about \$42 million for the rest. The companies also have partnered for the past five years, with Iron Mountain serving as LiveVault's largest sales channel. LiveVault offers disk-based backup and recovery for small and midsize companies and remote offices of larger companies. The company says it has more than 2,000 corporate customers. The buyout complements Iron Mountain's acquisition last year of Connected Corp., a provider of PC back-up and recovery offerings.

## F-Secure buys ROMmon

■ Finnish security vendor F-Secure has acquired network-monitoring appliance vendor ROMmon. The deal will give F-Secure a new device to add to its line of security products for ISPs. ROMmon's product, renamed F-Secure Network Control Appliance, will eventually be integrated into new security products for ISPs. Terms of the deal were not disclosed.

## COMPENDIUM

### A smashing success

Some guy convinces enough 'Net users to donate \$430 so he can get in line for 55 hours, buy one of the first Xbox 360s at a local store — and then smash it to pieces with a sledgehammer in front of horrified fanboys. See the proof at [www.networkworld.com](http://www.networkworld.com), DocFinder: 1146.





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# Users urge BlackBerry maker to settle

BY JOHN COX

The latest setback for Research in Motion in its long-running patent infringement battle has at least some users saying it is time for the BlackBerry maker to give up the fight and settle.

The company's legal woes have raised the specter of users of the popular e-mail devices getting their service cut off, though legal experts and industry observers say that is highly unlikely.

That's especially true given that RIM last week was given another chance to settle. Just days after a federal judge's rulings against RIM, its legal adversary, NTP, sent RIM an offer of a license contract, with a royalty rate of 5.7%.

NTP is a patent holder and licensing company co-founded by Thomas Campana, an engineer and inventor to whom the original patents in this case were issued. He died last year. NTP in a suit filed in 2001 claimed that RIM's products and services infringed those patents.

Last week, U.S. District Court Judge James Spencer for the Eastern District of Virginia denied a request by RIM to enforce the terms of a \$450 million settlement that RIM had negotiated with NTP earlier this year. For reasons that

## A losing battle?

BlackBerry maker Research in Motion last week suffered another setback in the long-running patent infringement case brought by NTP. Here's a recap of the case.

**November 2001**

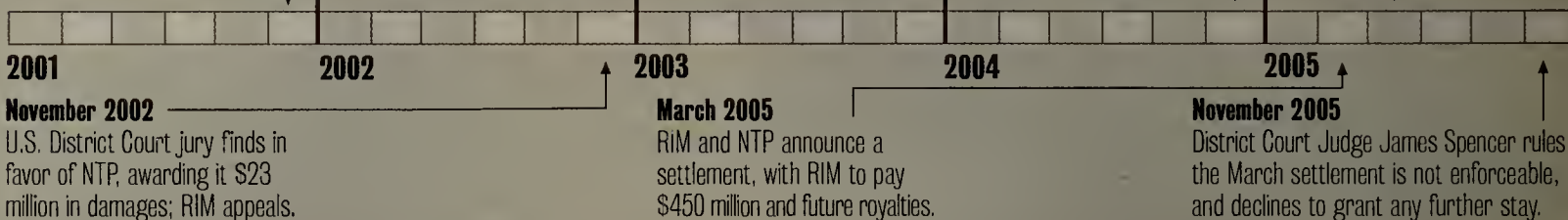
NTP files a complaint that claims RIM's BlackBerry infringes on several NTP patents, awarded originally to NTP co-founder Thomas Campana.

**December 2004**

Appeals Court cancels the injunction, sends back the decision for some fine-tuning, but agrees that RIM infringed on NTP's patents.

**June 2005**

Patent Office made a preliminary ruling that the claims in seven of eight NTP patents are invalid; RIM asks court to enforce the terms of the settlement, and stay proceedings pending final Patent Office rulings.



haven't been made public, the two companies didn't consummate that deal. According to RIM's Web site, Spencer concluded that the settlement was not an "enforceable agreement" (see details at [www.networkworld.com](http://www.networkworld.com), DocFinder: 1148). Spencer also denied a RIM motion to hold off court proceedings "until the U.S. Patent & Trademark Office reaches a final determination in its reexamination of the NTP patents."

Ironically, the day after Spencer's ruling, the Patent Office issued yet another preliminary rejection of

yet another NTP patent claim, according to an Associated Press story. RIM argues these rejections show NTP's patents are invalid. The ruling could not be confirmed by *Network World's* deadline.

The 5.7% royalty rate offered by NTP is the same rate that a jury previously had ruled was fair, according to Don Stout, a partner at the firm of Antonelli, Terry, Stout & Kraus LLP, and the other co-founder of NTP. Stout now does NTP's legal work and still holds company stock. That trial ended in a victory for NTP, and the essen-

tial finding — that RIM had infringed — was upheld by an appeals court.

"We're saying to them, 'you have the opportunity to settle,'" Stout says. RIM did not respond to a request for comment by deadline.

RIM should take the offer, users say.

"The BlackBerry is a very big piece of the technology picture at our firm," says Frank Gillman, director of technology for Allen Matkins LLP, a law firm in Los Angeles. Nearly every lawyer and all of the top management staff

have the e-mail devices, about 250 in all.

"The BlackBerry has such a pervasive presence in legal, entertainment, medical and other client-oriented businesses, and in half the [U.S.] government," Gillman says. "RIM's going to have to come to the table and say 'what do we need to do' to settle?"

RIM still faces the possibility of a new injunction that could shut down its service and product sales in the United States. That's not what NTP wants. "It's only if they refuse to pay that we're going to shut them down," he says.

RIM says it has created software that would allow its service to continue running without infringing NTP patents. "Our position is that this design-around is [still] covered by our patents," Stout says.

The promised software fails to comfort. "They say they have patches and ways that will enable the customer base to continue to use these products," Gillman says. "Clearly what they don't say is, 'it's going to be a royal pain in the butt to download all these patches, deploy them, administer the change-over and everything else.' It's going to be complicated."

Consulting firm TowerGroup says a court ruling in favor of NTP is unlikely to lead to a wholesale shutdown of RIM's service. The firm expects the two companies to reach a settlement within 30 days, with RIM agreeing to pay \$750 million to \$1 billion. That could eventually lead to higher costs for companies that rely on the BlackBerry, TowerGroup says. ■

## Wireless laptops get new defense

BY JOHN COX

Network Chemistry is extending its security software to cover laptops running various kinds of wireless connections.

The new product, called RFprotect Endpoint, will include an agent that runs on laptops and enforces wireless security policies. The idea is to protect users when they're outside the corporate perimeter and connecting to hot spots, cellular networks or Bluetooth smartphones, where laptops are more exposed to network threats than on corporate wireless LANs (WLAN).

The product is about to enter beta tests and is scheduled to be released during the first quarter of 2006. Pricing starts at \$29 per laptop.

RFprotect Endpoint is focused on the wireless interfaces in a laptop. It can apply enterprise security policies to 802.11 WLAN adapters, cellular data cards and Bluetooth connections. The agent runs on all the common Windows operating systems and doesn't interfere with VPN clients, the company says.

"An agent can monitor and regulate and

limit how much the user can change the configurations and properties of their wireless [network interface card]," says Skip Bayro, senior IT security consultant with OpoTech.

Bayro has deployed for several clients Network Chemistry's RFprotect Distributed, a combination of software and dedicated wireless sensors for detecting and blocking WLAN intrusions. One client, an energy company with more than 400 laptops, will be a beta site for the new Endpoint product.

"This will be an agent that can be 'cookie-cuttered,' configured at a central console, and pushed out to users anywhere," Bayro says. "For example, users won't be able to change the [Service Set Identifier], or change the 802.1X authentication supplicant, or make any of the other changes to their wireless connectivity that would compromise information security."

The basic approach is similar to that of other companies, which use an agent

architecture to secure various parts of a client device. Safend's Protect product ([www.networkworld.com](http://www.networkworld.com), DocFinder: 1145) controls peripheral interfaces, including those used by WLAN cards. Other companies in this market include Centennial Software, McAfee and Senforce Technologies.

The Endpoint agent can be downloaded to any number of laptops using Microsoft Systems Management Server, Macrovision's Flexnet and other tools. Once a laptop powers up, the agent contacts the Endpoint server software, which downloads updated configurations and policies to the laptop.

Administrators work with the server program to create, save, download and activate wireless security policies for Endpoint. Examples include requiring a corporate VPN client to be active, prohibiting the use of ad hoc WLAN connections between two laptops and using only specified access points. ■

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## Open source GPL to get major revision

BY PHIL HOCHMUTH

A proposed revision of the GNU General Public License could have lasting effects on users and developers of open source software.

The Free Software Foundation (FSF) and Software Freedom Law Center last week said they are working on GPL Version 3 (GPLv3), which will be the first major update to the open source license since 1991.

"If it ain't broke, don't fix it," is part of the reason why the GPL's current version has lasted for 14 years, says Peter Brown, executive director of the FSF. However, he acknowledges that 14 years is an eternity in the world of software development, and that the dramatically changed climate in which open source code is written and used calls for an update to the license.

The FSF is scheduled to release a draft of GPLv3 next month, with subsequent second and final drafts expected by the summer and fall. The final version of GPLv3 is expected by the spring of 2007.

While Brown would not give details of the revamp, a major aspect of revision will center on open source license compatibility.

"We are looking to improve compatibility with other important free software licenses," he says. "GPL is the dominant free software license, with 70% of open source software licensed under" it.

Brown says most software licensed under GPLv2 will be supported by GPLv3. Most individuals and organizations that write software under the GPL opt for language that allows their products to be supported by any future version of the GPL. However, this is not the case with Linux, which is licensed explicitly under Version 2 of the GPL and will not be grandfathered into GPLv3.

Brown adds that any open source product licensed under GPLv2 will have to be relicensed for Version 3. "It's their decision to

See GPL, page 68

# NW event lays out '06 Roadmap

BY CARA GARRETSON

FRAMINGHAM, Mass. — Implementing VoIP, virtualizing storage and computers, and evaluating identity management are just some of the priorities for 2006 recommended to attendees of *Network World's* IT Roadmap '06 technology tour, which kicked off last week.

The tour aims to delineate hot technologies for the coming year and how to implement them, and how they can align with business goals. It focused on eight areas: remote-office networking, LANs, application acceleration, VoIP, security, network management, storage and identity networking.

For the most part, these areas line up with the IT priorities that one attendee has. "We need to do enterprise-to-enterprise collaboration to pull teams from different businesses together, and we're just starting to explore identity management," said Greg Weldon, director of service development with Philips Medical Systems in An-

### Mapping the future

Suggestions for what to focus on in 2006 that were shared at *Network World's* IT Roadmap event last week:

- Assess VoIP; in particular examine the potential for bottom-line savings.
- Put in place a strategy for remote and virtual workers, because 90% of employees are somewhere other than headquarters.
- Create an information stewardship task force to define how to handle information protection, disaster recovery/business continuity, information life-cycle management, compliance and data quality management.
- Virtualize the data center, both storage and computers.
- Put identity management on the front burner to facilitate "virtualized security."

SOURCE: NEMERTES RESEARCH

dover, Mass. "We're looking at identity management from a device, network and application perspective, more than just people."

One area that Weldon doesn't view as a priority is application acceleration. "It's just not a tremendous problem for us, as long as we invest in bandwidth," he says, adding that the company supports 4,000 field workers.

At the conference Johna Till Johnson, president and senior founding partner of Nemertes Research and *Network World* columnist, detailed a five-year plan for businesses' network priorities.

Much of the suggested planning for 2006 includes building task forces around key technology strategies, including information stewardship — which Johnson defined as the art and science of managing information in the data center — distributed and virtual workers, on-demand infrastructure and mobility. These task forces should help organizations evaluate how related technology

can help boost productivity and make a positive affect on the organization's bottom line, as well as build deployment road maps and benchmarking initiatives.

The technology that powers those strategies will come from a variety of areas, she said. Compliance, storage, security, identity networking and information life-cycle management products are necessary to support information stewardship. Keys to implementing a distributed and virtual workforce strategy are VoIP, real-time collaboration, application acceleration and remote-office management. Also essential ingredients for building an on-demand infrastructure are storage, information life-cycle management and application acceleration, while application acceleration and remote-office management are essential to mobility.

To register for a tech tour coming to your area, go to [www.networkworld.com](http://www.networkworld.com), DocFinder: 9427. ■

## Sun shipping eight-core Niagara servers

BY JENNIFER MEARS

Sun this week is aiming to change the way corporate customers look at rack-dense servers by unveiling low-power-consuming, high-processing systems based on its new multicore, multithreaded UltraSPARC T1 processor, code-named Niagara.

Among a number of announcements, the most significant is expected to be the introduction of Sun's first products in its Niagara server line. The servers are aimed at I/O intensive workloads, such as Web serving, where systems must respond to thousands of requests simultaneously. Sun says the units

will consume about half the power of Xeon- or Opteron-based systems while handling as many as 32 individual software instructions per processor.

The 1U T1000 server, which has six or eight processing cores on a single piece of silicon, is expected to be available next year and priced starting at less than \$4,000, according to sources familiar with Sun's plans. The 2U T2000, meanwhile, is available with four, six or eight processing cores on a single chip and a starting price of about \$8,000. Each core on the Niagara processor can handle four software

### The details

Key features of Sun's new multicore T2000 server:

<b>Processor:</b>	1 UltraSparc T1 multicore processor, with four, six or eight cores
<b>Memory:</b>	16 slots, each supporting 512M, 1G or 2G bytes DDR-2 DIMMS, for a maximum 32G bytes of memory
<b>Networking:</b>	Four Ethernet ports
<b>PCI interfaces:</b>	Three PCI-Express and two PCI-X slots
<b>Power:</b>	Two hot swappable, redundant power supply units
<b>Remote management:</b>	Sun's ALOM (advanced lights out management) controller
<b>Operating system:</b>	Solaris 10 pre-installed

SOURCE: SUN DOCUMENTATION

threads simultaneously.

Sun, which declined to comment, hopes the servers will boost its position in the exploding low end of the server market by addressing the environmental concerns of IT managers struggling to maintain overprovisioned data centers. The new processor runs as fast as 1.2 GHz, yet consumes just 70 watts of power, a bit more than an average household light bulb. Today's processors average about 100 watts or more, according to industry experts.

"Niagara is hitting the market at a good time. The concerns it addresses, such as power effi-

ciency, are high on a lot of IT managers' minds today," says Gordon Haff, an analyst at Illuminata. "We'll have to see how it stacks up on both benchmarks and real-world application performance — but if it really does offer, say, double or better Xeon performance that should be enough to grab the attention of anyone with a large Linux server farm."

Power and heat issues are the driving forces behind a shift in processor design industrywide: Instead of simply ramping up clock speed, chipmakers are putting more cores on a single piece of silicon to enable more

work to be done by fewer power-hungry processors.

IBM has had a dual-core Power processor since 2001 and introduced a quad-core Power5+ in October. HP rolled out its dual-core PA-RISC chip last year, and both Intel and Advanced Micro Devices introduced dual-core x86 chips this year. ■

► Read more about Sun's expansion of open source software. Page 34.



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# Windows management service debuts

BY JOHN FONTANA

FullArmor this week is expected to introduce a service designed to help companies use policies to manage Windows-based mobile laptops and remote machines that are not routinely connected to a network.

FullArmor's hosted service, called PolicyPortal, is a centralized hub from which administrators can set, deploy and enforce usage procedures via the group-policy features of Microsoft's Active Directory. Windows client machines are outfitted with a small software agent, FullArmor's GPAnywhere client, that regularly checks the portal for new or updated policies when the machines are connected to the Internet.

The service is targeted at companies that want to centrally manage users who are not regularly connected or ever connected to Active Directory, including roaming laptop users, remote or home clients and corporate contractors, as well as kiosks, point-of-sale terminals and ATMs. It also is targeted at companies that do not use

Active Directory and at service providers.

Service providers such as Chicago-based Itility are eyeing PolicyPortal as part of disaster-recovery plans for mobile users.

"We want to use PolicyPortal for things such as restoring folder icons on a desktop, mapping drives or reestablishing Outlook profile settings," says Rick Neubauer, Itility's CTO. The company provides a data backup for mobile users who lose or have their laptops stolen, and the company plans to augment that with a one-click service that would restore all of a user's settings and configurations via policy once they get a new laptop.

"We can't do that now. For those people in the field you spend hours with them on the phone. Not all that is alleviated, but a good chunk of it is," Neubauer says.

PolicyPortal, which FullArmor says is likely to be released in the future as an appliance that can be deployed internally, is tapping into a growing interest in group policy to manage servers and machines.

Group policy, which is supported on Windows 2000 and XP, and Windows Server 2003, lets administrators manage, customize and lock down desktop and server settings based on a set of policies maintained in the directory.

The foundation of PolicyPortal is Active Directory running on a 64-bit version of Windows Server 2003 Release 2 with Web-based software that provides the management interface.

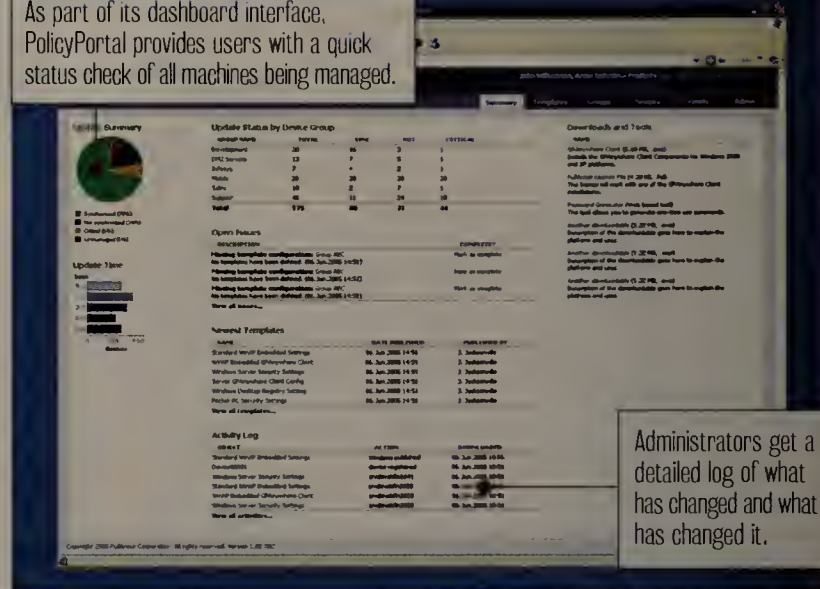
The package lets administrators log on and upload digitally signed policies. The policies are stored in a database and each company has its own table to ensure privacy. In the PolicyPortal management interface, administrators can see the machines they are managing and set policies for individual machines or groups of machines. Also included is a management dashboard that shows whether machines are in compliance with security policies, identifies which settings are enforced or not enforced, and provides a log of changes and who made them.

"This is very much like [automated] patching," says Danny

## Policy portal

FullArmor this week is releasing its PolicyPortal, a hosted service that lets administrators manage mobile laptops and other devices over the Internet.

As part of its dashboard interface, PolicyPortal provides users with a quick status check of all machines being managed.



Administrators get a detailed log of what has changed and what has changed it.

Kim, CTO for FullArmor. "It is an automatic update — that is how the policy works."

FullArmor also is integrating its Intellipolicy, which provides extensions for group policy, with PolicyPortal so users also can

automate tasks as printer setup, local administrator setup or denying the use of USB drives.

PolicyPortal is priced at \$1 per managed machine per month, and there is a one-time setup fee of \$1,500 per administrator. ■

# Vendors tackle SOA management, security

Five companies plan to release this week products aimed at corporate environments.

BY JOHN FONTANA

As the concept of service-oriented architecture begins to find life in corporate computing, a handful of vendors this week plan to unveil software to help companies manage and secure their SOAs, as well as integrate them with legacy systems.

Amberpoint is expected to announce its intent to ship this month Version 5.0 of its security and management software that includes a new policy system designed to

help manage large collections of Web services. Also, Forum Systems, GT Software, Mindreef and SOA Software plan to unveil wares at the Gartner Application Integration and Web Services Summit in Orlando, Fla.

Amberpoint 5.0, which costs \$70,000 per server, features a policy system that allows users to manage Web services as a set or group rather than one at a time. The company also has retooled its security subsystem and added management support for non-XML traffic, such as Java.

"With 5.0 you can have a bucket of services and policies applied to those buckets," says Jorge Mercado, SOA architect for MedicAlert, a nonprofit foundation that provides a repository of healthcare information. "This gives us a way to throw services in a bucket and have a set of policies ready to go." Mercado plans to begin testing Amberpoint 5.0 this month because he says the current policies and procedures used for his growing list of Web services won't scale.

Forum Systems is expected to release Forum Vantage XML Accelerator, an appli-

ance built on a 64-bit platform that can process more than 10,000 XML messages per second. The 1U appliance, which is priced at \$45,000, supports Simple Object Access Protocol (SOAP) messages, XML Schema Validation, XPath processing and XSLT transformations.

GT Software is set to ship Ivory Service Architect, a set of tools for implementing an SOA using existing mainframe hardware, data, applications and developer skills. The product, which is priced at \$25,000, is made up of Ivory Studio and Ivory Server. Studio is a graphical tool for building mainframe operations into business services, while Server has a SOAP processor, service flow processor and central service repository.

SOA Software plans to reveal that it has acquired Merrill Lynch's X4ML Mainframe Web services platform, which the financial services firm developed four years ago and uses today to support 600 Web services. SOA Software will sell the platform as service-oriented legacy architecture. Pricing was not announced. (See more on Merrill Lynch's efforts, page 1.)

Mindreef is scheduled to release Mindreef Coral, a Web services collaboration platform for companies building Web services and SOAs. The Coral server, which costs about \$1,000, stores data and includes tools that let users test, diagnose and support Web services. The tools are tailored to specific types of users, such as architects, managers, business analysts, developers and testers. (Read more about vendors are doing with SOA features, page 38.) ■

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## Merrill Lynch

continued from page 1

or over the next few years. "We never found any compelling reason to stop doing what we were doing."

Until now. The software product Merrill Lynch built, called X4ML, is going commercial through its new owner, SOA Software, which plans to announce the deal this week.

"We felt like we'd invested quite a bit of money in the technology already, and we also felt like the opportunity in the open market was such that [the product developers] needed to be given a chance to take their idea and test it in the open market," Brown says about the sale of X4ML to SOA Software.

The commercialization of technology that got its start in an enterprise IT setting, such as X4ML, is not unprecedented. There's a constant flow of intellectual property from government agencies and universities to the commercial world. Companies in other industries have done the same thing.

Shell funded Kalido, a spinoff formed in 2000 to tackle data management challenges. Boeing spawned MessageGate, a messaging security and compliance vendor, in 2003. And newly launched BlueNote Networks was inspired in part by Fidelity Investments' desire for VoIP-based collaboration software.

Most recently, start-up TrueBaseline came out of stealth mode and announced a product based on technology developed by Westinghouse Electric. Stringent regulatory requirements for reporting changes to IT system settings led Westinghouse to develop its own tools when commercially available configuration management products wouldn't suffice, says Aruna Endabetla, CTO at TrueBaseline and a former project manager at Westinghouse.

Westinghouse used the product internally for several years before marketing it to other companies a couple of years ago. But trying to expand the product to meet wider demand, as well as execute software sales, proved incompatible with its core business. Westinghouse decided to sell the IT assets to TrueBaseline's founders.

The independence is a good

## Drawn from experience

IT know-how makes its way from corporate teams into commercial products through different paths. Here are some examples.

Enterprise source:	Merrill Lynch	Westinghouse Electric	Fidelity Investments	Boeing	Shell
Technology:	Tool for exposing mainframe transactions as standard Web services interfaces	Configuration change management software	IP telephony communications platform	Messaging security and compliance	Data management
Transaction:	SOA Software this week is announcing that it is buying the technology assets from Merrill Lynch.	Westinghouse sold the technology assets to some of the software's creators, who left to form start-up TrueBaseline, which launched in November.	No formal technology transfer, but Fidelity Investments' internal efforts to develop collaboration software using VoIP technology helped inspire BlueNote Networks, which launched in September.	Boeing spun-off the technology in 2003 and helped fund start-up MessageGate.	Shell funded a former employee, who founded Kalido in 2000.

thing, Endabetla says. Before the formation of TrueBaseline, developers in Westinghouse had to balance the nuclear electric power company's needs with those of the broader market — which sometimes slowed down evolution of the technology. "Now we can look at the real market needs and develop the product for the entire market," she says.

### Seeds of invention

Companies today seem to be thinking harder about how they can leverage non-strategic technology assets, says Bob Hower, a general partner at venture capital firm Advanced Technology Ventures. "We've had conversations with several companies lately that are trying to figure out how to get more mileage out of the intellectual property they've developed."

But the transition from in-house technology to commercial product isn't always successful. Sometimes poor personnel choices can derail a spinoff. "Not every large corporation IT person is an entrepreneur," Hower says.

In addition, not every nifty IT invention is suited for broader markets. A product that originates inside an enterprise IT department "often has too much local culture," says Bill Gassman, research director at Gartner. There can be patent issues, scalability shortcomings and code problems. "It may have become spaghetti code by the time it's ready to go public because fea-

ture after feature has been added to the product, and the discipline of commercial software development just wasn't there."

In general, there's often valuable technology inside companies that has the potential to be commercialized, but most companies don't have the resources to accomplish it, adds Vern Brownell, CTO at blade server vendor Egenera.

Prior to founding Egenera in 2000, Brownell was CTO at Goldman Sachs. During his 11-year tenure at the financial services firm, Brownell considered the commercial potential of some of its technology.

"A number of times we had what we thought was pretty good technology," he says. But readying an in-house product for use outside the institution required a level of investment that didn't seem justified. "There were other higher-priority strategic or competitive things to work on from a development standpoint that made more sense."

What came out of Brownell's experience at Goldman Sachs was the idea for Egenera. Brownell had helped shift the financial firm's infrastructure from predominantly mainframes and midrange servers to a heterogeneous, distributed computing environment and knew firsthand the management complexity that resulted.

Brownell didn't see anything on the horizon to alleviate the problem — but he thought there

needed to be. That thought led to Egenera.

"Customers have unique perspectives that vendors don't always see," Brownell says. "When you're in the middle of it, when you wake up in the middle of the night with cold sweats because of what you've created, you have a different sense of urgency about it."

### Balancing act

Having a former IT user at the helm — such as Brownell in Egenera's early days — can help a start-up get off the ground, Hower says. "It lends credibility to a team," he says.

It also helps when a vendor's technology has been shown to work in a demanding enterprise IT environment. In the case of the X4ML technology, "if that has been made to work in a financial environment where high reliability, security and performance are all big issues, it probably has a better chance of being successful" than other technology spinoffs, Gassman says.

SOA Software says the Merrill Lynch technology will help extend its product portfolio to the mainframe. Enabling mainframe resources to participate in a services-oriented architecture (SOA) has been a challenge, says Eric Pulier, executive chairman of SOA Software. "Getting these CICS mainframes to become part of the new infrastructure has been problematic — problematic for us to deliver to our customers,

and problematic for customers to find a solution."

The deal also gives SOA Software critical expertise: A team of four Merrill Lynch programmers and engineers who built X4ML are going with the product to SOA Software.

Such a staff shift is usually unavoidable in the process of commercializing in-house technology through a spinoff or technology acquisition. It's likely that there will need to be some reworking of the product for the wider market, and "that can be hard to do without folks who know where all the skeletons are," Hower says.

On the other hand, for the company that developed the intellectual property, a spinoff can mean losing key personnel, Gassman says.

For Merrill Lynch, making the decision to sell the X4ML technology required trade-offs, Brown says. "You want to do the right thing for the people who created the technology, the right thing for Merrill Lynch shareholders and the right thing for the future of the technology itself."

Not everyone at Merrill Lynch initially agreed that the X4ML technology should be sold. While Brown had no hesitations, he says it was not as easy to convince others in the financial services firm. "Executive management is often uncomfortable with divestment because they're wondering what they're giving away," Brown says.

Convincing everyone — and then choosing the right buyer from among "quite a few companies who were interested in buying the software" — took about six months, Brown says. In the end, management agreed and everyone walked away happy, he says.

"The folks that developed the code are very happy that they're now able to go look at the real addressable market instead of the addressable market inside Merrill Lynch." ■

## Got great ideas?

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## Firewalls

continued from page 1

security at the same time.

"We think the application firewall is going to go away and be replaced by something that is a little more availability- and assurance-focused," says Andrew Jaquith, a Yankee Group analyst.

Such platforms work to keep servers available to end users and safe from attacks. They also make sure that the traffic moving in and out of data centers is not compromised, he says.

Stand-alone Web application firewalls examine HTTP and HTTPS traffic at the application layer, looking for attacks that try to slip by as legitimate application flows. "The products are defending against people that are trying to use malicious attacks to cause Web sites to disgorge sensitive information or for break-ins," Jaquith says.

Start-ups Teros, MagniFier, Kavado and Sanctum, all bought by others, made these devices. Citrix bought Teros, F5 bought MagniFier, Protegrity bought Kavado and WatchFire bought Sanctum.

While these vendors approach the problems of accelerating and securing Web application traffic differently, they share a common spot in the network: in front of application servers. The features they offer can include load balancing traffic among servers, compression, encryption, reverse proxying of HTTP and HTTPS traffic, checking for application conformance and pooling TCP sessions.

For its part, Citrix aims to merge its Web application firewall with its application switch, so the device will distribute traffic to servers and also parse it for application-layer attacks, the company says. This integration is scheduled for the second quarter of next year, according to the company.

Expect NetContinuum to add software tools next year that make configuring application-security policies easier, says Varun Nagaraj, CEO at NetContinuum. The company also is considering what role its application gateway might play in identity and access management, under schemes such as Security Assertion Markup Language, which relies on applications to authenticate users.

F5 will look to protect XML and SIP traffic to support Web services and VoIP, says Erik Giesa, vice president of product management

## Things to know about Web-application firewalls

While they protect applications from such exploits as buffer overflows and format string attacks, application firewalls are a targeted defense mechanism that doesn't solve all Web security problems. For instance, they:

- May require the tweaking of certain Web apps or Webified client/server apps to work properly.
- Can't replace traditional network-layer firewalls or intrusion detection/prevention systems.
- May need reconfiguration to deal with attacks against newly discovered application vulnerabilities.
- Can work independently of load balancers and application switches.
- May not meet regulatory demands for data protection.

and marketing for the company. It also is looking to add WAN-acceleration technology to its platform and to produce a software developers' kit to encourage the creation of self-securing applications that could block traffic when they discover breaches. To do this, the application would tie into software governing F5's Big IP application switch to cause a rule change within Big IP that would block suspect traffic.

Imperva plans to develop auditing and assessment tools that help customers comply with such regulations as the payment-card industry standard, the Health Insurance Portability and Accountability Act and the Sarbanes-Oxley Act for protecting private information, says Shlomo Kramer, Imperva CEO.

Protegrity expects to blend its database security gear with the application-protection software it got with Kavado, says Jeannine Bartlett, vice president of product strategy and development for Protegrity. "Our releases in the coming year are directed at back-end reporting, statistics, metrics, mapping specific applications to customers' various needs to comply with regulators. That's what larger corporations are really looking for," she says.

All this activity marks a coming-

of-age for application firewalls, Whiteley says. Most of these devices stem from reverse-proxy technology in which traffic to Web servers is terminated by the proxy and passed on to the servers in a separate session, and then the server response is proxied. While the traffic is proxied, the device looks at it to determine whether it represents an attempt to exploit application vulnerabilities.

Vendors didn't sell many of these boxes, says Whiteley, who estimated revenues per company topped out at \$10 million per year. But because they occupy the same spot in the network as application switches and load balancers/application accelerators, it makes sense to integrate them, he says.

Some customers have bought application switches as separate devices that they deploy in tandem with load balancers. For instance, Baker Hill, a financial-services application service provider in Carmel, Ind., has deployed a Teros (now Citrix) application firewall in front of an F5 Big IP appliance, which sits in front of Microsoft IIS servers, says Eric Beasley, the firm's senior network administrator.

Customers demanded the application firewall be installed, he says. "As we marketed to larger financial institutions, they looked at that architecture and said it's Microsoft. I see Nimble, I see Code Red, I see all these problems. We won't do business with you unless you put some kind of a reverse proxy in front of that environment," he says. "We have clients who say in their contracts if that ever gets removed, we break our contract with you. It's that important."

Pacific Northwest National Laboratory, which does work for the U.S. Department of Energy, uses a NetContinuum application firewall to protect its Web applications, says Mark Hadley, a research scientist in the laboratory's cybersecurity group.

This sometimes requires reworking applications so they can get through, Hadley says. For instance, if a certain field in an application protocol uses a character that also is used in the Web application URL, such as a forward slash, it could represent a vulnerability that an attacker could exploit. The options are to let the traffic through unexamined or rewrite the application to get rid of the

ambiguity, Hadley says. So users should be prepared for possible work on their applications.

Hadley recommends setting up a test environment to run applications through before they are deployed to identify and remedy such glitches.

Whiteley says this type of complexity may push some customers to deem application firewalls too complex to deploy, especially if

their applications aren't critical to the business.

As vendors carry out their plans to integrate application firewalls in the same device with application switches and create software tools to make them easier to configure, more business customers will use them, Whiteley says. "It will hit mainstream adoption in another nine to 12 months," he says. ■

# HP set to unveil mgmt. dashboard

BY DENISE DUBIE

HP this week is set to share details on its latest OpenView offering, which promises to help organizations better track application performance by delivering different statistics to people with different jobs.

HP OpenView Dashboard 1.0 software is designed to enable IT and business staff members to create a portal to display data or statistics they would typically monitor through multiple third-party systems.

The software includes server-based portal technology and a workstation-based modeling agent. Users can point and click to add services and systems to portal views.

Using technology acquired with Talking Blocks in 2003, HP integrated parts of its Management Integration Platform (MIP) into Dashboard to enable the software to request information and accept data from multiple third-party systems.

For instance, Dashboard using the open interfaces established in MIP can ask a Remedy or Peregrine trouble-ticketing system for data to display in the portal for a service support manager. The software also can subscribe to Microsoft update or Symantec security Web sites to incorporate information from them. For example, the system will collect data and alert IT managers automatically if their services are experiencing problems, rather than managers having to check multiple monitors. HP says the software will support an unlimited number of service views.

James Maas, network monitoring engineer at Fresenius Medical Care in Lexington, Mass., got a peek at the product last year when he was employed at Yahoo, which beta tested the software. Maas also heads up the New England Chapter of OpenView Forum, an independent user group for HP's management software. He says the software will ease the pain of monitoring for multiple IT professionals as well as service and business managers.

"Each person has a different role when they are monitoring. Instead of each of us having to go and check multiple systems and pull up different stats to see if everything is performing as expected, this software will send an alert notifying you that something is wrong and you can drill down from there," Maas says. "I'm really going to push to bring it in here because it would help with our bandwidth monitoring and other services."

Jean-Pierre Garbani, a vice president with Forrester Research, says Dashboard will help users incorporate more automation into their daily monitoring and could speed time to resolution.

"This is a dashboard that represents a certain process, or modeled service, and for each element of the process it will deliver indicators that can be captured to help determine the overall performance," he says. "It can show this data in real time through one pane."

HP OpenView Dashboard 1.0 will compete with IBM Tivoli Enterprise Portal, which IBM developed with its acquired Candle technology. Pricing starts at \$60,000, and the software is scheduled for general availability in the first quarter of next year. ■

► Read more HP news, page 20.



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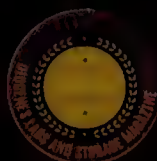


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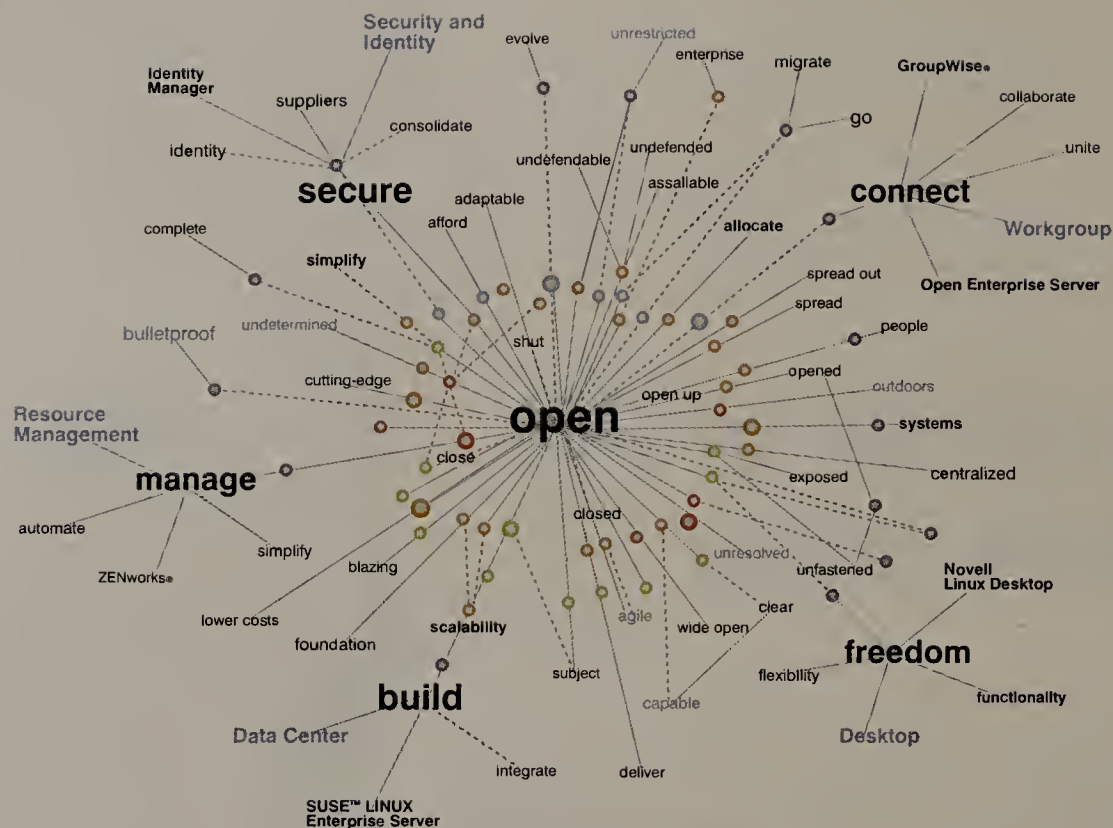
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# Anti-offshoring legislation heats up

BY NANCY WEIL,  
IDG NEWS SERVICE

Bills that would severely limit offshoring were introduced this year in almost all 50 states as well as in the U.S. Congress, and there is no indication that legislative efforts are easing up.

Most of the bills that have become law seem to lack teeth and in some cases have had negative consequences. A few states, for example, had to pay millions of dollars more to move call center contracts back to the United States. But lobbying efforts to pass stronger legislation appear to be intensifying.

"On the state level, these efforts will continue," says Stuart Anderson, executive director for the National Foundation for American Policy (NFAP).

Service and blue-collar workers have mobilized to support laws restricting offshoring. Rescue American Jobs has a legislation tracker on its Web site, and says its mission is to build the "largest American workforce mobilization in history" as a response to outsourcing and offshoring. The group contends that offshoring is a consequence of executive greed and urges its members to action.

At the other end of the spectrum is the Technology CEO Council, a group of leading IT companies, including Dell, Intel, IBM and

## The paper chase

There are hundreds of bills in state legislatures that are intended to curb offshoring or make it less profitable. Here are a few examples:

State/Bill	Intent	Status
California/Bill 3069	Expresses intent of legislature to give preference to California companies for state contracts.	In committee
California/Bill 3021	Requires companies to report the number of employees in California, in the U.S. and worldwide.	In committee
Massachusetts	Prohibits outsourcing state contract work outside the U.S.	Passed both legislative bodies, waiting for governor's signature.
Virginia/Bill 151	Gives 20% price preference for state procurement to U.S. companies.	In committee
Washington/Bill 3178	Prohibits state contract work from being performed outside the U.S.	In committee

Motorola. The group's Web site lists "10 common myths about worldwide sourcing." It includes a statistic that even some in the anti-offshoring movement will acknowledge: Forrester Research has forecast the number of outsourced U.S. jobs to reach 3.3 million by 2015, which translates to about 250,000 layoffs annually, according to Lael Brainard and Robert Litan of the Brookings Institution.

But these figures need to be considered in context. "It is small relative to total U.S. employment

of 137 million and accounts for less than 2% of the roughly 15 million Americans who involuntarily lose their jobs each year," the council wrote.

At the federal level, NFAP's Anderson expects to see continued efforts by lawmakers to curb offshoring and outsourcing by introducing amendments to pending legislation. Last year, two amendments that would have restricted outsourcing of federal government work and the use of federal funds in states that permit offshoring were passed by the

Senate, but were dropped by conference committees.

Anderson expects legislators will turn to data-privacy and identity-theft issues to stem the export of call centers and other jobs.

"It really only takes one state to pass a bill, for example on limiting data being sent overseas, to completely interfere with a whole range of industries that rely on being able to send data across a border," he says.

In cases where state legislation has been approved and taken effect, negative consequences have sometimes occurred, with two of the most-cited examples being in New Jersey and Indiana. A New Jersey measure to create 12 call center jobs in the state wound up costing \$900,000 more than offshoring the center, according to Anderson in an analysis he wrote titled "Creeping Protectionism." Other policy analysts note that in Indiana the cancellation of a state contract for a call center for unemployment services was expected to lead to unemployed residents having fewer services.

The NFAP tracks bills that have been introduced. It counted more than 112 in at least 40 states in the first quarter of the year. Most bills have been referred to committees, some are stalled, some have been killed and only a handful have passed. ■

# HP bolsters utility services

BY TOM KRAZIT, IDG NEWS SERVICE

HP last week introduced several utility computing services that will cater to companies looking for a way to handle rapidly changing demands for computing resources.

HP's new Infrastructure Provisioning Service (IPS) and Application Provisioning Service (APS) provide extra computing power to businesses that don't want to deploy servers just to handle temporary surges in demand, says Brian Fowler, utility services global director for HP.

Utility computing allows customers to tap into a pool of computing resources hosted by a provider. IBM and Sun also offer or are developing similar services.

Some customers, such as animation giant PDI/Dreamworks, face cyclical demand for computing resources tied to certain events, such as the release of movies. In the past, these companies would have to purchase and main-

tain sufficient computing resources to handle those peaks in demand, but that capacity would sit idle most of the time, Fowler says.

Dreamworks has been working with HP on utility computing services for about three years, says Mike Kiernan, head of systems infrastructure for PDI/Dreamworks, the Glendale, Calif., animation arm of Dreamworks movie studio. Computer-generated movies such as "Shrek 2" and "Madagascar" were created using early versions of HP's flexible computing services, he says.

PDI/Dreamworks faces strict production deadlines, and HP's services allow Dreamworks' artists to take advantage of additional computing resources to make sure they get the color or movement of characters exactly right, Kiernan says. Without the extra capacity, PDI/Dreamworks would have to reallocate computing resources dedicated to future films to handle the current problem, delaying the

production of upcoming films, he says.

HP's services let customers send their data for processing to HP data centers in Paris and Houston, says Norman Lindsey, architect of HP's utility computing services. The data can be compressed and encrypted for transport over the Internet, or larger data sets can be physically mailed to those HP centers, he says.

With the basic IPS, customers can choose the type of HP server that will process their data, Fowler says. Basic processing on 32-bit processors from Intel costs 55 cents per processor, per hour, while servers based on Intel's Itanium processor are available for \$1.50 per processor, per hour. Servers based on Advanced Micro Devices' 64-bit chips or Intel's 64-bit x86 processors are priced in between those two endpoints, he says. The IPS and IPS+ offerings are available now, while the APS offering is scheduled to be released in the first half of next year, Fowler says. ■

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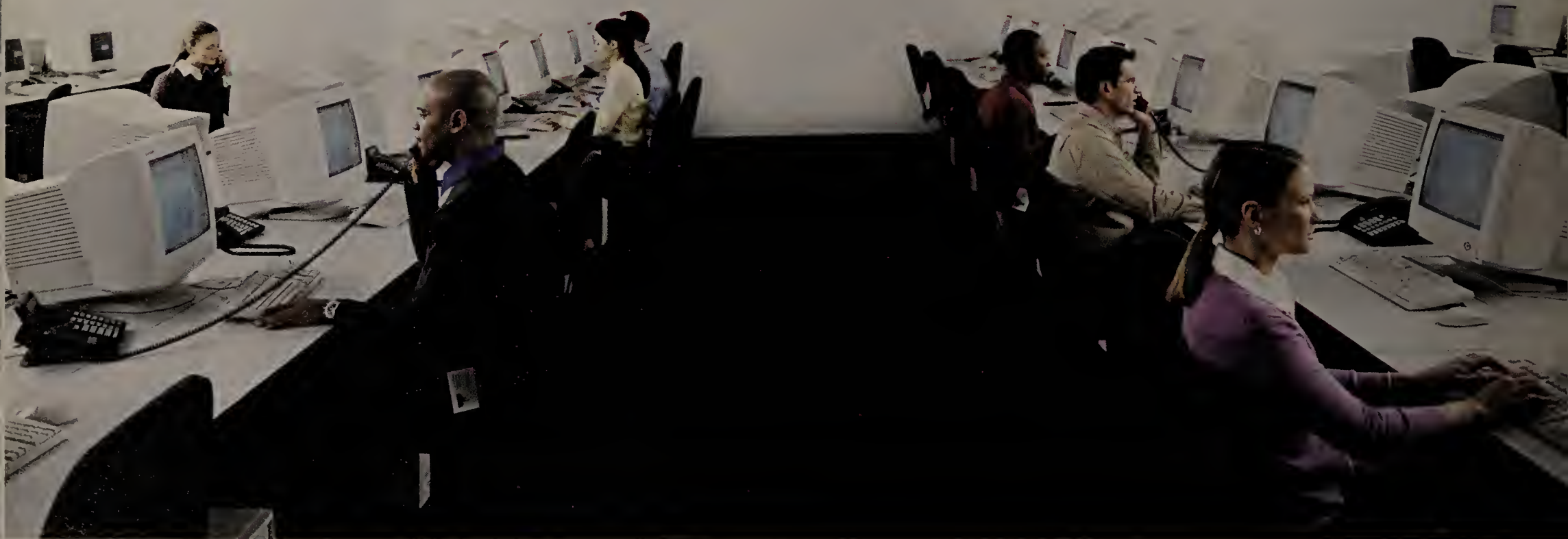
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# Vendors mix voice, mobile tools

■ **Netgear** has agreed to settle a class-action lawsuit accusing the company of inflating the data speeds of its Wi-Fi network devices in advertising materials. Netgear, in a Nov. 23 filing with the U.S. Securities and Exchange Commission, has agreed to pay \$700,000 to settle the lawsuit initiated in June 2004. A second lawsuit, filed in February, was voluntarily dismissed in favor of the 2004 lawsuit. Under the terms of the settlement, customers who purchased Netgear wireless devices between January 1999 and this month will be eligible for a 15% discount on the purchase of a new wireless device. The settlement must be approved by the Santa Clara County Superior Court in California. Netgear disputes the claims made in the two lawsuits and does not "admit any liability whatsoever," according to the settlement agreement filed with the SEC.

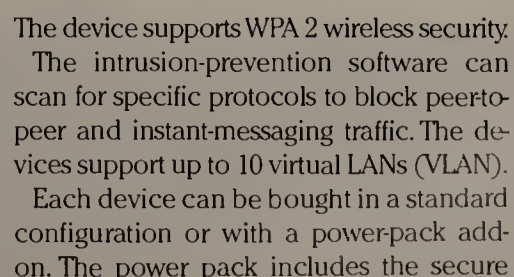
The MC50, Symbol's currently available enterprise digital assistant, is aimed at cor-

**See Partnership, page 26**

- 1 A Windows-based Symbol MC50 enterprise PDA, running Symbol's QoS software, supports Avaya's IP Softphone application by providing echo cancellation and voice-traffic prioritization. Symbol WLAN infrastructure enforces QoS and provides roaming connection handoffs.
- 2 Back-end Avaya IP PBX and messaging servers provide full phone features and applications such as unified messaging to mobile clients.

# Check Point offers security appliances

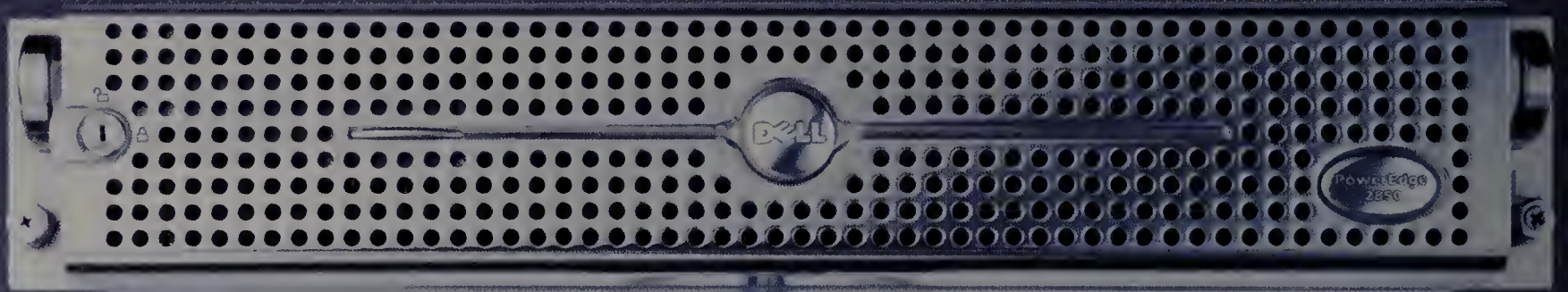
Check Point includes support for a separate hot-spot security zone in the 500W appliance so it can be used in a retail setting, for example, where store owners want to offer customers Internet access but keep that traffic segregated from business traffic.



The power-pack options are more suited to a small business with fewer than 200 employees that uses the device for its main

**See CheckPoint, page 26**





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\*Based on the SPECint<sub>rate</sub>2000 benchmark test performed by Dell Labs in July 2005 on a PowerEdge 2850, dual 2.80GHz w/2MB cache Dual-Core Intel Xeon Processors compared to a similarly configured PowerEdge 2850 with dual 3.00GHz w/2MB cache single-core Intel Xeon Processors. Actual performance will vary based on configuration, usage and manufacturing variability.

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**TOLLY ON TECHNOLOGY**  
Kevin Tolly

# The need for (enough) speed

As we progress through each year, one thing is certain — network gear gets faster. Sometimes the increase manifests itself by a move up the Ethernet speed ladder, from 100 to 1,000 or now 10,000M bit/sec. Other times it is marked by faster look-up engines or greater port capacity. In any case, the network vendor's mantra seems to be: You can never be too fast or have too many ports. But that is starting to change.

This year we've conducted validation projects for a series of ven-

dors of security infrastructure and server load-balancers where the focus on enough speed and enough bandwidth — enough to meet or exceed the WAN or LAN access bandwidth that the prospective customer had available to drive the infrastructure gear — was of paramount importance.

To paraphrase a vendor CTO: Why do you need to buy a Gigabit-throughput perimeter security device if your broadband access link will never exceed 100M bit/sec? This fact is nothing new. We've seen it when vendors providing VPN solutions to customers running T-1 links would fight over performance — one, say, capable of 50M bit/sec and the other of 70M bit/sec. Both solutions represented such overkill to the measly 1.5M bit/sec delivered by the T-1

that a comparison was academic.

Vendors now seem to recognize the obvious — that their devices can be placed effectively in a variety of configurations, that the key element of that configuration is going to be the access bandwidth, and that this can vary exponentially (T-1 to Fast Ethernet to Gigabit Ethernet) among customers that are in the same class.

A build-to-fit approach makes both practical and economic sense. Being able to buy a box guaranteed to deliver 100M bit/sec — or 1G bit/sec — at an appropriate price is attractive to prospective customers. Interestingly, vendors take different approaches when delivering this bandwidth-oriented solution.

Some use these calibrated bandwidth and throughput deliv-

ery levels to select the bill of materials for the box — the components used to construct the appliance. Knowing the target performance levels, it is much easier to right size the components by avoiding buying an overly powerful (and overly expensive) network processor and other components that affect the build cost and, ultimately, the customer's price. Customers can then buy the model that suits their environment.

Others take what can be called a lock-and-load — or perhaps load-and-lock — approach. They build a single box that can deliver at a variety of performance levels and use license keys to lock it to a certain level. A given box might be able to perform up to 1G bit/sec but will only do so when the

appropriate license key is purchased and applied.

The obvious upside to such an approach is that customers can develop their environment without the proverbial forklift upgrade. On the other hand, one wonders whether one might be overpaying for powerful processing that cannot be used (without the upgrade) and might not be necessary to use.

So as you look at your intrusion, encryption, load-balancer and other edge infrastructure, keep your need for speed — now and in the future — in mind.

*Tolly is president of The Tolly Group, a strategic consulting and independent testing company in Boca Raton, Fla. He can be reached at ktolly@tolly.com.*

## Partnership

continued from page 23

porate users. Longer battery life, voice support through its VQM software and integrated Wi-Fi are part of this business-focused package.

The Avaya Softphone client for the MC50 lets users have an extension on an Avaya PBX or IP-enabled legacy PBX, just like wired desktop digital or IP phones in an office or cubicle. The Avaya software includes all functions of an Avaya business telephone, with access to features through MC50 keypad shortcuts. A USB headset connected to the device is used to communicate.

The product package is designed to use Symbol's WLAN switching infrastructure, which consists of its WS5100 Wireless Switch and AP300 Access Point products. Similar to offerings from Cisco, Trapeze Networks, Aruba Wireless Networks and others, Symbol's equipment consolidates the management and security of WLAN access points on the WS5100 switch, and uses the AP300s as network-attached radios.

Voice over WLAN (VoWLAN) is a hot topic at industry trade shows and in telephony and infrastructure vendor pitches, says Jeff Snyder, a senior analyst with Gartner.

"There's a great deal of interest but not a lot of deployment outside a few vertical industries, because it takes a great deal of reengineering of the network to support [wireless VoIP] properly," Snyder says.

Technologies such as Symbol's VQM, which take care of WLAN hand-offs, QoS and voice packet processing, could spur adoption of Wi-Fi voice by making it simpler to deploy.

Symbol also will join Avaya's DeveloperConnection program, in which Avaya and Symbol engineers will design jointly developed voice and wireless technologies for enterprises.

Symbol is Avaya's third major WLAN partner in mobile IP telephony. The VoIP vendor also has a partnership with Proxim, which Avaya uses in its Wi-Fi VoIP/cellular hand-off product offering — along with handset maker Motorola. Extreme Networks, Avaya's largest network infrastructure partner, also offers a complete WLAN product lineup.

Avaya's broad partnering allows a broader potential customer base, Snyder says. "You won't see any vendors getting locked up with each other in exclusive deals" in the mobility and Wi-Fi voice markets, he adds. "No one has to get rid of [their WLAN infrastructure] to run Avaya IP voice."

The Symbol/Avaya product package is available from select Symbol/Avaya resellers and integration partners, who set pricing on an individual customer basis, according to the two vendors. ■

# Northrop Grumman to deliver IP conferencing net to DoD

BY PHIL HOCHMUTH

The U.S. Department of Defense last week picked Northrop Grumman to build its \$51 million IP videoconference network, based on hardware and software from Cisco and Radvision, network services from AT&T and technology from other partners.

The network project was awarded by the Defense Department's Defense Information Systems Agency (DISA). Northrop Grumman will install the DISA's Defense Video System Version II (DVS-II) network, which upgrades the current network from digital to IP video and audio conferencing. The DISA provides communications technology for the White House, the secretary of defense and the Joint Chiefs of Staff.

DVS-II will be built on Cisco's IP Video Conferencing (IPVC) 3540 Multipoint Control Unit and MeetingPlace IP voice/video conferencing software. Radvision's iView multimedia conferencing middleware, which integrates applications such as Microsoft Office, is another large part of the infrastructure.

Radvision says the deal will be worth \$6 million to \$8 million in software and services, and Cisco would not say how much of its IP

video hardware, software and services are involved.

DVS-II will provide "a key set of tools to enhance the Department of Defense's network-centric operations" and allow U.S. military organizations to communicate better during combat, said Otto Guenther, vice president and general manager of Northrop Grumman's Tactical Systems Division.

In addition to the Cisco/Radvision components, Northrop

Grumman will use AT&T network services, along with services and support from IT companies FC Business Systems, CritiCom and Netconn Solutions.

While Cisco is helping build the Defense Department's video network, it's also going after video technology in living rooms. The network giant recently announced plans to acquire Scientific-Atlanta in a deal valued at \$6.9 billion. ■

## CheckPoint

continued from page 23

firewall, Cresswell says. When used in conjunction with Check Point's Security Management Platform, a corporation could deploy security to branches where there is no onsite IT staff, he says. Bell Business Solutions preconfigures its Check Point appliances and ships them to customers for installation. The devices then connect to the management platform in Bell's network, he says.

Check Point also is introducing two update services for anti-virus and intrusion-prevention signatures and content filtering.

Standard models of Safe@Office 500 cost \$300 (\$500 for the wireless version) for five users to \$1,000 (\$1,150 for the wireless version) for unlimited users. Service packs cost an extra \$500 each.

Anti-virus and intrusion-prevention services cost \$180 to \$450, depending on the number of users, and content filtering costs \$50 to \$300, also depending on the number of users.

The two boxes and services are available this month. ■



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# ENTERPRISE COMPUTING

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## Open source firm to challenge VMware

BY JENNIFER MEARS

XenSource, the company founded to provide support and maintenance for the open source Xen virtual-machine monitor, is releasing its first commercial product, a set of tools that the company says will make it easier to virtualize servers.

Called XenOptimizer, the product is in beta for the latest release of Xen, a community-developed program that provides an alternative to commercial offerings from VMware and others.

XenSource is expected to announce this week that XenOptimizer will be generally available in the first quarter of next year,

says CTO Simon Crosby. Pricing has not been released.

XenSource also plans to announce general availability of Xen 3.0, the first major release of the software in more than a year.

Xen 3.0 brings a number of updates, including support for as many as 32-way symmetric multiprocessor virtual machines and expanded memory support for workloads with large memory demands. The new version also supports Intel's VT virtualization technology and is expected to support Advanced Micro Devices' (AMD) hardware-based virtualization technology early next year, which will enhance CPU and memory virtualization and will enable Xen to run under all operating systems, Crosby says.

Today, Xen supports only Linux on x86, though the Xen project at the University of Cambridge in England is working on porting Xen to HP Itanium servers, as well as PowerPC-based systems from IBM. Sun recently demonstrated Solaris x86 virtual servers running on Xen.

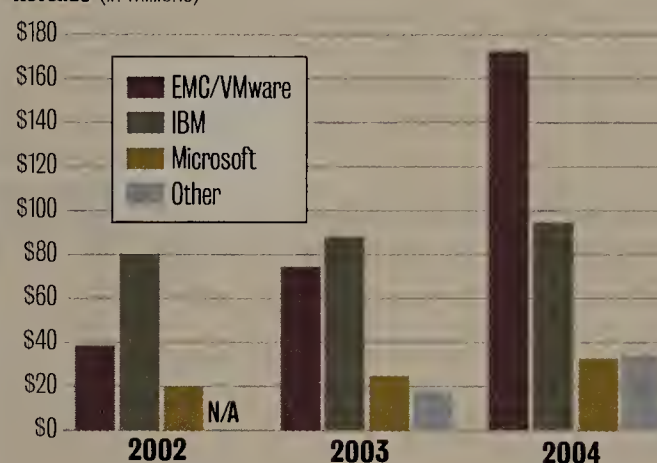
Xen backers say the software provides better performance at a lower cost than VMware, because it virtualizes operating systems at the kernel. That requires some modification to operating systems, but both Red Hat and SuSE say they will include support for Xen in their upcoming operating-system releases.

Still, even as Xen — developed by a group that includes AMD, Dell, HP, IBM and Intel —

### Virtual growth

While VMware now leads the fast-growing x86-based server virtualization software market...

Revenue (in millions)



SOURCE: IDC SOFTWARE MARKET FORECASTER, JUNE 21

... newcomers such as XenSource, which are lumped into the "other" category, are picking up steam.

#### 2003 to 2004 revenue growth

EMC/VMware	131%
IBM	7.4%
Microsoft	32%
Other	92.4%

### Short Takes

■ **InMage Systems** is adding business-event-based recovery and automated information tiering features to its DR-Scout suite of disaster-recovery software, according to an executive of the company. InMage is expected to announce this month that two large storage-equipment manufacturers will bundle InMage's software with their products, says Kumar Malavalli, CEO and co-founder. With the business-event-based recovery feature, users will be able to bookmark a predefined business event, Malavalli says. In the event of a disaster, the system automatically starts the recovery from the selected business event, he says. The feature is scheduled to start shipping in DR-Scout in the first quarter. By the end of next year, InMage plans to introduce a feature that uses a policy engine to enable data to be moved automatically from primary to secondary or tertiary storage, depending on the priority, importance and age of the data, Malavalli says. This would enable users to save on storage costs by allocating only critical data to more expensive and sophisticated storage. DR-Scout is targeted at the midtier market. The average price of an installation that protects about five servers with about 10T bytes of storage attached is \$50,000.

## Nokia pushes harder for enterprise mobility

BY JOHN COX

Nokia's recently announced plan to buy Intellisync, a wireless e-mail vendor, for \$430 million will give the cell phone giant key software for crafting mobile data applications for business.

Intellisync will be folded into Nokia's Enterprise Solutions group, headed by former HP executive Mary McDowell. The group, formed in January 2004, is intended to be a key source of growth and revenue for Nokia, as it competes with Good Technology, Research in Motion, Visto and, increasingly, Microsoft, to address needs of

gains broader support, it has a tough road ahead in the fast-growing virtual machine market, analysts say.

"Xen's market is a good one for them to be aimed at, but there is a huge gorilla [in VMware] they're competing with that is gaining weight fast," says Charles King, principal analyst at Pund-IT Research. "They claim to be offering a real significant price/performance benefit, which could increase the uptake of Linux servers."

For enterprises, the question is how big

their Linux presence is and what kind of open source expertise they have to support a Xen rollout, he says. XenSource hopes the introduction of XenOptimizer will help alleviate the expertise concern.

"Xen the open source product is a pretty raw technology... Until now, the majority of deployments have been by people who are Linux experts and have developed their own solutions to roll it out," Crosby says. "What [XenOptimizer] provides is all the wrapping around Xen that one would need to actually go off and deploy in a normal enterprise environment."

XenOptimizer provides a dashboard view of virtualized resources, enabling customers to monitor and manage a Xen-based virtual environment from a single location, Crosby says. The software doesn't plug into higher-level management tools, such as HP OpenView or IBM Tivoli, though XenSource plans to add that type of support next year, he adds.

Andi Mann, senior analyst for systems management at Enterprise Management Associates, says XenOptimizer will be an important factor in determining how Xen fares in corporate data centers.

"But every time you introduce a new technology, you introduce a management shift," Mann says. "With something like XenOptimizer, it becomes a lot easier to manage, and that's critical not just to acceptance, but also to what kind of real returns businesses will get out of virtualization." ■

customers looking to extend back-end applications and data to mobile devices.

But Nokia has a way to go, says Teney Takahashi, market analyst with the Radicati Group. Enterprise solutions accounted for 3% of Nokia's 2004 revenue, he says. While the group's revenue jumped 57% in 2004 compared with general enterprise revenue in 2003, the group's yearly net loss also increased, by 41%.

Recently, the group launched the Nokia Business Center, a push-based e-mail service similar to RIM's BlackBerry offering.

See Nokia, page 30



# Q&A Cerf backs broader Google focus



*Internet pioneer Vint Cerf, Google's chief Internet evangelist, recently spoke with Juan Carlos Perez of IDG News Service, a Network World affiliate, about a variety of topics related to the Mountain View, Calif., search giant. Here is an edited transcript of the conversation.*

**As Google broadens its menu of services beyond search to areas such as blogging, Web mail, Wi-Fi access, instant messaging and social networking, does it run the risk of losing its focus?**

Absolutely not. What's happening here is the aggregation of a remarkable collection of people, all of whom have a very visceral and strong appreciation for what is possible to do with software and information. They are exploring a variety of ways in which to make these computer-driven tools more useful and cross-functional. The focus isn't simply on search. It is on making information discoverable and useful, so all of these things you see happening at Google are side effects of expanding on the original paradigm, which was making search an effective tool.

**Is it a good strategy for Google to be in the enterprise-search market with products such as the Search Appliance and the Google Mini?**

Yes, I'm very excited about the packaging up of Google's capabilities in a way that can be delivered to an enterprise. The opportunity there is to deliver this capability to a fairly broad range of enterprises from very small to very large. The ability to help people organize information, especially unstructured information, is a very powerful tool.

**What do you make of the mash-ups phenomenon, those combination**

**Web sites/Web applications?**

I can't tell you how excited I am about it. We know we don't have a corner on creativity. There are creative people all around the world, hundreds of millions of them, and they are going to think of things to do with our basic platform that we didn't. So the mash-up stuff is a wonderful way of allowing people to find new ways of applying the basic infrastructures we're propagating. This will turn out to be a major source of ideas for applying Google-based technology to a variety of applications.

**Most of Google's revenue comes from paid search ads. Should the company try to diversify its revenue sources?**

It is always a good idea to understand how dependent you are on your revenue streams and whether there could be more diversification. However, we have a very long way to go before we have exhausted that segment of [the overall advertising market] that we have reasonable access to. I'm not suggesting complacency at all, but I'm suggesting we have some ways to grow in our current business model on a global scale before diversification becomes an issue.

**Since early last year, Google has been involved in a steady stream of controversies, the latest one being publishers' lawsuits over the Google Book Search program. How well do you see Google handling these controversies?**

Part of my job is to try to make that better. On the Google [Book Search controversy], I don't think we explained as carefully as we should have how this was going to work and how we would protect the interest of the publishers. And the publishers have leaped to a conclusion that is not supported by what we're trying to do. Part of my job is to articulate that more carefully, and I hope we can overcome the concerns that have been expressed. ■

## nww.com

Google galore

Go online for more about where Google is headed and its enterprise network strategy. Get caught up by viewing a Google timeline and a list of its offerings.

**DocFinder: 1126**

## Nokia

continued from page 29

But initially, this center supports only data-enabled cell phones and other devices using the Symbian operating system.

"Intellisync will strengthen Nokia's position in the [enterprise] wireless e-mail market and provide Nokia with a solid wireless e-mail platform for [rebranded by] carriers," Takahashi says.

Radicati projects healthy growth for corporate e-mail in general and wireless e-mail in particular (see graphic, right).

But wireless e-mail is only one part of the enterprise picture.

"What [Nokia] really wanted was the application-integration [capabilities] from Intellisync," says Jack Gold, principal with J. Gold Associates. "Wireless e-mail will become a commodity. The data that enterprises are really willing to pay for [to access wirelessly] is the data from their SAP, Oracle and other applications."

Intellisync's flagship product is its Mobile Suite. A server-based

gateway behind the corporate firewall links corporate e-mail servers, such as Exchange and Domino, with a wide range of mobile devices and operating systems. Two other parts of the suite handle device management and provisioning, as well as data and file synchronization.

"In wireless e-mail, most of our deployments are smaller" in size, says Rip Gerber, chief marketing officer for Intellisync. "But we have thousands of seats, sometimes tens of thousands, for our device-management software and our data- and file-synchronization software."

Rivals downplay the merger. "Intellisync focuses on consumer, 'prosumer' and the small-business market," says Terry Austin, president of Good Technology. Good has been working with Nokia for months on joint engineering and support for the upcoming Nokia Eseries handhelds, which are aimed at business users. "Intellisync doesn't run a network operations center [as Good does], and as such doesn't offer the same

level of guaranteed service and IT management features that the high-end enterprise segment demands."

Gerber says Intellisync offers a hosted e-mail service, targeted at small businesses. For large enterprises, it has software based on 126 issued and pending patents that deal with security, device management and the various complexities associated with extending enterprise application data to wireless devices.

Others suggest the merger is not a good fit.

"If you look at Nokia, about 95% of its revenues come from devices or infrastructure" products, says Sanjay Kamble, vice president of marketing for Visto. "You need to be able to partner with the device manufacturers to get early releases so you can support them in your software. Will Nokia actually get early release of [competing] devices from Motorola and Samsung?"

In October, Intellisync unveiled an innovation that hints at what Nokia means by "beyond e-mail."

The new product is called Intellisync Information Bots, or infobots for short, which are small, menu-driven data-access

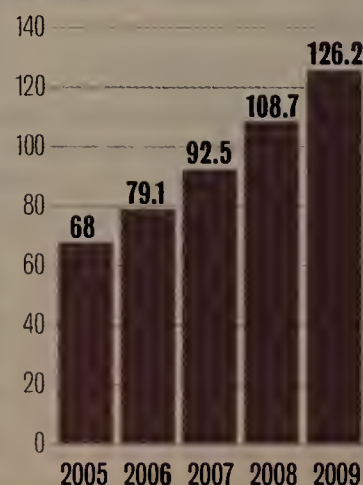
programs, designed to be quickly created with an accompanying development kit and scripting tools. ■

## Unwired e-mail

As corporate e-mail keeps growing, more of it is expected to be delivered wirelessly.

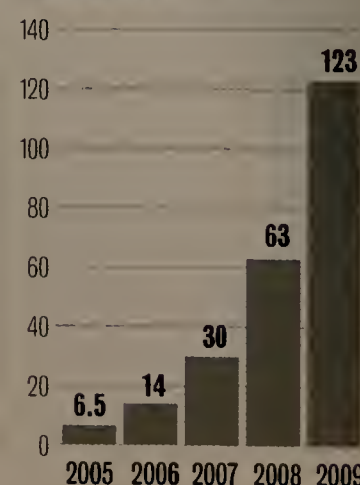
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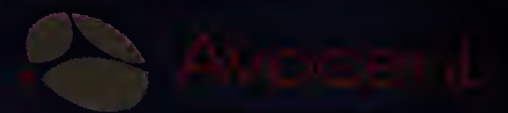


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# APPLICATION SERVICES

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## Short Takes

■ **Mobile software vendor Common-Time** last week released mSuite 4.1, which delivers wireless, push Lotus Notes e-mail, personal-information management and instant messaging capabilities to users of devices that run on Windows Mobile 5.0. Microsoft recently released its Mobile 5.0 technology, which includes support for push e-mail — except for Notes — to the Exchange platform. With mSuite 4.1, wireless push e-mail can be used with Lotus Notes advanced features such as room/resource booking on the Notes calendar. The software is available now and is priced at \$309 per user.

■ **Symantec** last week upgraded the discovery tool for its **Veritas Enterprise Vault** e-mail and instant messaging archiving software. Compliance Accelerator Version 6.0 is aimed at helping financial services companies perform supervisory reviews of electronic communications to assure regulatory compliance. Compliance Accelerator gives customers a companywide review of e-mail, instant messages and digital faxes. The package supports storage hardware from EMC, IBM, Network Appliance and others. The new version of Compliance Accelerator is available now. Pricing starts at \$41,377 for a 1,000-user installation that includes Enterprise Vault.

■ **SAP** last week acquired **Callixa**, a San Francisco developer of enterprise information integration software. The deal closed about three months ago. SAP had not discussed it publicly before. SAP bought Callixa for its distributed query processing technology. The technology enables customers to write a query that can be distributed among different databases and other data stores, gathering information and sending it back to the application in a single, unified response. SAP currently licenses a distributed query technology from MetaMatrix, but wanted to embed the technology.

## Mirapoint bolsters messaging server

BY JOHN FONTANA

Messaging vendor Mirapoint this month plans to begin shipping an appliance combining e-mail, management and security that is designed to help small and midsize businesses simplify their infrastructures and reduce costs.

The M50 Messaging Server includes an address book and calendaring, group scheduling, anti-virus and anti-spam capabilities. It works with a Web-browser client or integrates with Microsoft Outlook. The M50 is intended to simplify the infrastructure that companies need to construct and manage to handle the hordes of e-mail they receive and the malicious attacks that e-mail invites. Mirapoint is aiming M50 at businesses with 100 to 500 users.

"What they are doing makes sense," says Michael Osterman, president of Osterman Research. "The messaging needs of a small organization are almost as sophisticated as those of a large one but its [staff] resources are much less." A recent study by Osterman

Research showed that the per-user messaging costs of SMBs can be 10 times those of large companies. "A box that is plug-and-play is going to be very appealing. You want something [that has] all the capabilities but needs less tinkering," Osterman says.

The M50, which comes in a 1U form factor, combines e-mail and security with a built-in internal directory based on Mirapoint's stand-alone Directory Server. Users also can integrate the M50 with Microsoft's Active Directory. The appliance runs on a Unix-based proprietary operating system and supports both POP and IMAP.

The M50 has a set of policy-based controls, such as outbound and inbound filtering. Users can set policies, such as e-mail aging and storage, that are generated off the internal security functionality or through

### The business cost

More than  
**50%**

of small to midsize businesses spend \$10 per user, per month to provide messaging services. About 25% say the cost is \$30 per user, according to a survey by Osterman Research.

the mail store. Policies also can be set based on individual users, groups, locations, titles or specific roles.

The appliance features 53G bytes of space that can be expanded to 113G bytes and includes RAID and battery backup for the cache to prevent data loss during a power out-

age.

Mirapoint competes with CommuniGate, Gordano, Rockliffe, Scalix, IPSwitch and Sendmail.

"We think this is going to fit in the retail space or with the deskless workforce," says Craig Carpenter, director of corporate marketing and global channels at Mirapoint.

The M50 is available starting at \$13,000. User licenses are sold in 100-user bundles. ■

## Microsoft partner offers collaboration

BY ELIZABETH MONTALBANO,  
IDG NEWS SERVICE

A Microsoft software partner has launched the beta of a new product that will let users of Microsoft SharePoint Portal Server sites collaborate and share documents and information even when they're working offline.

Colligo Networks' Colligo for SharePoint is designed to give offline users full access to SharePoint-based portal sites, says Barry Jinks, president and CEO of Colligo. The company expects to release a full-production version of the software at the end of January.

The new product allows users to view and open SharePoint-based portals even when they are not connected to a network, says Brent Bolleman, strategic marketing manager for Colligo. Users do this by typing in the URL of the SharePoint site they want synchronized locally on their laptop through the Colligo application, which downloads and organizes all of the available content on the site for offline use, he says.

When accessing that information locally,

users also can provide updates to the site via their laptops. These updates will be synchronized with the SharePoint site when users are online again, Bolleman says.

Colligo also plans to offer peer-to-peer file sharing capabilities in a future version of its SharePoint product that will let offline users link up and collaborate on projects in real time, according to Bolleman.

The company already has a general flagship product, Colligo Workgroup Edition, that enables users of Windows applications that use shared drives to serve out information via peer-to-peer networks when they're disconnected from a corporate server, Jinks says.

The company also has an edition of Workgroup that lets customers of IBM's Lotus Notes application collaborate in real time without needing a connection to a Lotus Domino server. Colligo Workgroup for Lotus Notes also allows users to work in real time offline by establishing peer-to-peer networks among users' computers so they can share and update information on

the fly, Jinks says.

Colligo decided to release a SharePoint product when customers told them that, while Microsoft's portal is cost-effective and efficient for online collaboration, it lacks a rich offline client for workers who don't always have access to networks, Jinks says. Cliff Reeves, a general manager of .Net at Microsoft, discussed this problem in a recent blog entry that highlighted Colligo's work to make SharePoint a better collaborative environment for offline workers.

"Windows SharePoint Services — which offers shared document libraries — has long suffered a technical disadvantage compared to Notes/Domino because it provides no automatic offline and synch support," Reeves wrote in a September entry on his "Most of the time" blog ([www.networkworld.com](http://www.networkworld.com), DocFinder: 1130). "Auditors using SharePoint will not have a local copy of the SharePoint files unless they copied them manually. However, Colligo now plans a plug-in for SharePoint."

See SharePoint, page 34



**NET INSIDER****Scott Bradner**

From a distance it looks like a good time to be a traditional phone company in the United States. The FCC has given these companies an open license to exploit their dominant market positions. The U.S. House and Senate are running down a path to empower them to destroy the Internet. The International Telecommunication Union's standards division is defining technology that will let phone companies block "free" use of "their" networks by interlopers such as Google and Vonage. Billions of dollars are being spent

# Pity the poor telephone company?

on takeovers and being poured into deploying new video services. But maybe things are not as rosy as they seem.

I'm writing this just as SBC's \$16 billion takeover of AT&T has been consummated, and as Verizon's \$8.5 billion buyout of MCI is getting the last of the state approvals. That is a lot of money being spent to buy up failing long-distance companies just as the whole concept of long-distance is in its dying days.

If Congress continues on the path it is on, we will soon get a new telecom regime that will let the big telcos and cable companies block third-party use of the Internet connections that their customers buy from them, all in the name of protecting their networks and helping law enforcement. Unless something drastic happens, this will destroy the

Internet, at least for most residential and small-business users. But since most residential users think the Internet is just the Web, most of them will not notice unless they have subscribed to non-carrier VoIP services. Small-business owners are likely to notice quite well their reduced options for alternate phone service.

At the same time, the technology that enables the phone companies to offer extensive video services is well-enough developed for them to start widespread deployment and thus have a hook into tens of billions of dollars of cable TV revenue. Sounds like a great time to be a phone company. But things may not be quite as great as they appear.

More and more, residential users are dumping their landline phones in favor of cell phones. Once the cell-phone E911 ser-

vice becomes generally deployed, many more customers will follow them. The In-Stat research group reports that close to 10% of the U.S. population already uses a cell phone as their primary line, and that over half are willing to consider the option. There goes the cream of the residential phone business — unless you happen to have a wireless division. And even when that is the case, there is a lot of competition, so the profits will be a lot less.

Businesses are moving in droves to VoIP, with ZDNet Research reporting that 75% of them have tried it out and 75% of those who adopted it like what they got. And there is no requirement that a business get its VoIP from the carrier that provides its Internet connectivity or even from a carrier at all.

Then there is the video dream.

Verizon is spending billions of dollars to bring fiber to the home so that it can offer what residential users already have from cable TV and satellite companies — hundreds of channels with little on them and video-on-demand. *The New York Times* reports that content owners want more from you phone companies than they get from your competitors, and your competitors can always reduce their fees to match anything you can do.

Maybe it's not a great time to be a phone company after all.

Disclaimer: It's (almost) always a great time for Harvard to be Harvard, but the above muse is my own.

*Bradner is a consultant with Harvard University's University Information Systems. He can be reached at sob@sobcomcom.*

**SharePoint**

continued from page 33

Microsoft has worked closely with Colligo to develop its SharePoint product, according to Reeves and Colligo's Jinks.

Microsoft plans to enable some offline capability for SharePoint through the next version of Office, code-named Office 12. But Bolleman, who is under a nondisclosure agreement with Microsoft about specific Office 12 features, says that SharePoint offline features offered in the product will be limited. Colligo's product, however, will keep the organization and design points of SharePoint sites intact when providing offline functionality instead of serving up capabilities in pieces, he says.

Jinks, whose company has about 200 customers, says Colligo's software is used mainly by large accounting and consulting firms, such as PricewaterhouseCoopers, which have employees at different locations who need to access corporate documents in the field.

Colligo has not released pricing for Colligo for SharePoint, according to Jinks. Colligo Workgroup Edition currently sells for \$99 per seat, and Colligo Workgroup for Lotus Notes sells for \$149 a seat. ■

# Sun expands menu of free software

**BY JENNIFER MEARS**

Sun, which early this year released a free version of its Unix-based Solaris operating system, last week announced plans to unleash its entire software stack to the open source community.

Following through on its promise, Sun announced it would make its Java Enterprise System — a suite of server middleware that includes identity management, Web infrastructure software and an application server (which Sun released to the open source community earlier this year) — available for free.

In addition, Sun said it is making available at no cost an integrated suite of software called the Solaris Enterprise System that adds Solaris; the PostgreSQL database; N1 management tools, which include the N1 system manager, the N1 service provisioning system and the N1 grid engine; Java, C and C++ development tools; SunRay thin client software; and secure desktop software to the Java Enterprise stack.

"The majority of the components are available online," said John Loiacono, executive vice president of software at Sun, during a conference call with

reporters and analysts. "We are making available probably about 80% of the code. There are some pieces of the code that we are working toward making available. Those will be available probably by the first quarter of next year."

Customers can expect more code, including storage management software to be released to

the open source community over time, he said.

"The summary of this whole thing is we just believe that anyone still dealing in the proprietary Unix space or the proprietary [software] space is challenged because this is . . . how people today are developing applications," Loiacono said.

The move makes good on

promises Sun President and COO Jonathan Schwartz made in the summer in detailing Sun's plans to eventually contribute all of its software code to the open source community. Schwartz believes Sun can better compete with companies such as Microsoft and IBM by taking advantage of the open source model to drive up volume. ■

# Software vendors bare teeth at sales time

**BY JEREMY KIRK, IDG NEWS SERVICE**

Software vendors are still employing aggressive methods to lock in sales with end users, according to a new study by market analyst Ovum Ltd.

Ovum surveyed 125 organizations in North America and Europe, examining common sales techniques adopted by vendors. Every end user surveyed reported at least one issue with a vendor, and that forceful sales pitches left them spending more money than they wanted to, and sooner, Ovum says.

Many software companies say they have reformed questionable sales tactics, but the study found that vendors still employ them

when under sales pressure, the study says. About a dozen large and small vendors were mentioned in the course of the survey, but Ovum did not name them in the report "since no vendor came out darker than the rest," says David Mitchell, software practice leader at Ovum.

Vendors primarily used two methods. In the "puppy dog" approach, vendors offer software for a trial period and then charge after the user has a relationship with the vendor. To guard against this method, Ovum cautioned organizations to define trial use periods and purchasing arrangements prior to using software.

Another method, nicknamed "gun metal in the mouth," occurs

when an organization employs software in mission-critical areas for many years. An organization may be offered software at a substantial discount initially, but at renewal time, the vendor may threaten to remove the software unless the user commits to a more expensive contract, Mitchell says.

To avoid this situation, users should have a commercial alternative available for the function and be willing to call the vendor's bluff. Mitchell says Ovum recommends that if companies spend more than 10% to 15% of their IT operating expenditures on one vendor, they should have a sourced replacement plan ready in case negotiations go bad. ■



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## SPECIAL FOCUS

## APPLICATION SERVER UPDATE

## Application servers get SOA treatment

BY ANN BEDNARZ

As more corporate architects adopt a new approach to building applications, the vendors responsible for the foundation — the application server — are getting their own products in shape to accommodate the new development style.

That style is service-oriented architecture (SOA), which calls for the construction of modular, reusable application components that avoid the brittleness of traditional legacy IT assets. Businesses are ready for it. At least 80% of the development projects initiated over the next two years will be about service-enabling applications, according to Gartner.

To meet the demands of SOA-seeking businesses, Java 2 Platform Enterprise Edition (J2EE) application server vendors BEA Systems, IBM, JBoss and Oracle have been outfitting their wares with once-optional, but now expected, features such as support for Simple Object Access Protocol and messaging.

But it's not enough to simply provide the tools that let users build services-based applications, says Shaun Connolly, vice president of product management at JBoss, an open source middleware vendor. It's also important that the application server's technical architecture is service-enabled, so that customers can swap in or replace functions such as Enterprise JavaBeans (EJB) containers, servlets, messaging tools and management features as needed. "A monolithic type of approach would make it difficult to take one out and use another," Connolly says.

To that end, JBoss has been reworking its microkernel to make it more detailed, so customers can be more selective about the Java objects they deploy. The new JBoss Microcontainer 1.0 will be the foundation of JBoss Application Server 5.0, which is due out midyear 2006, Connolly says. "We'll have basically replaced the underpinnings of our server with this newer, lighter-weight, service-oriented microcontainer."

In a corporate setting, granularity is important so users can skinny down an application server platform for resource-constrained deployments, such as a network appliance, while loading up on services for a high-end clustered environment, Connolly says. "The only way you can do that is if the platform is designed in a service-oriented fashion."

JBoss Application Server 5.0 also will feature Seam 1.0, which is a new component

## What's on tap

Simplifying application development is a key objective of the forthcoming Java EE 5 architecture. Here are some of the highlights:

- Upgrade of the Enterprise JavaBeans (EJB) component architecture, which enables much more simplified EJB development.
- Persistence API, a new standard API for object relational mapping, a method of representing data from database as Java beans.
- JavaServer Faces framework, designed to make it easier to build Web-based user interfaces in Java.
- Use of annotations, which let developers avoid dealing with certain J2EE deployment descriptors.

model from JBoss that simplifies the task of writing complex Java applications by masking some of the code required to handle application state management. "It drives a lot of code out of the process," Connolly says. And less code means fewer bugs, he says.

## Java EE 5

In the bigger picture, application simplicity is a key theme of the forthcoming Java Platform Enterprise Edition 5 (Java EE 5) specification, which is nearing completion. Earlier this year Sun announced a new naming convention for its Java platform, dropping J2EE 5.0 in favor of Java EE 5.

App server vendors Oracle and JBoss have begun developing with Java EE 5, the cornerstone of which is the latest release of the EJB component architecture.

In the past, hampering EJB adoption were complex development and heavyweight container requirements, but EJB 3.0 is lightweight and much easier to program, Connolly says. "If you've had any preconceived notions about Enterprise JavaBeans in the past, I encourage folks to erase their memories. Because this is basically how things should have been done in the first place," he says. "It's tough to say on average how much it simplifies things down, but it can be a factor of 10x in the size of code."

Blake Connell, who handles product marketing for BEA Systems' WebLogic Server, agrees. "One of the knocks on EJB is that it's a pretty highball art for developers. The

next EJB release will alleviate some of that," Connell says.

For its part, BEA made quick advances into the world of Java EE 5 with its recent purchase of SolarMetric, a Java tools maker known for its persistence engine. Object-persistence technology helps developers work with relational databases and handle transient objects, such as an online shopping cart or airline ticket reservation.

BEA plans to incorporate SolarMetric's Kodo engine into its next major WebLogic Server release, due in late 2006. In the meantime, developers can download the SolarMetric technology, if they want to play with Java EE 5 and EJB 3.0 previews, Connell says.

Another early player in the EJB 3.0 world is Oracle, which co-led the specification development with Sun and has released a preview version of its EJB 3.0-ready Oracle Application Server. Oracle Application Server 10g Release 3, which is scheduled to be available by midyear 2006, will offer baked-in support for Java EE 5 and EJB 3.0.

JBoss, too, offers a preview of EJB 3.0 and plans to include support for it in JBoss Application Server 5.0 when it comes out next year. IBM will support the new specs in WebSphere Application Server 6.1, due out next year.

## Other trends

Another key theme among J2EE application server vendors is open source. As open source J2EE products mature, it's becoming a long-term option for mainstream enterprises, according to Gartner.

JBoss is a pioneer in open source J2EE, but it faces growing competition from some big players. The latest to lay claim on the market is IBM, which in May acquired open source middleware vendor Gluecode Software.

In October IBM announced plans to release a "community version" of its WebSphere Application Server based on Apache Geronimo. WebSphere Application Server Community Edition (WAS CE) will use Apache Derby and Apache Geronimo. It's freely available, and users can opt for a support license as part of IBM's WebSphere portfolio, says Marie Wieck, vice president of IBM's WebSphere platform.

It's not uncommon for users to do initial development work using the WAS CE open source application server and then port the application to a network-ready version of WebSphere as production requirements

grow, Wieck says. "They can start very quickly and easily without concerns about cost models, see how it progresses and then if there are large volume or full production-level requirements, they can always switch over to a more traditional approach."

On the open source front, BEA has a strategy for what it calls a "blended open source development," which lets developers use a mix of open source and commercial products. BEA plans to merge its existing WebLogic Workshop developer tools with the NitroX toolset gained in its recent purchase of M7, which makes an Eclipse-based integrated development environment.

A push for industry-tailored products also is an emerging trend among key J2EE application server vendors.

Newly available from BEA is WebLogic SIP Server 2.1, an integrated J2EE and Session Initiation Protocol (SIP) application server. It's aimed at helping telecom companies accelerate the deployment of new multimedia services, says Ken Lee, who handles product marketing for BEA's WebLogic Communications Platform.

"Any new SIP apps that are built — whether it's voice over IP or video over IP — by definition will need an integration with HTTP or the Web," Lee says. "It makes a lot of sense for developers to be able to develop to a single, integrated J2EE-SIP platform."

IBM, too, is readying a SIP-enabled version of WebSphere Application Server aimed at the telecom industry and due out next year, Wieck says. SIP support will be baked into the product, not tacked on, she says. "We see it as an extension to the application server, not as a separate add-on."

For BEA, another key area of focus for its application server group is making inroads into traditionally Java-wary shops. Due to be available this month is BEA WebLogic Real Time Edition, which is aimed at handling "very precise transactions that need to occur very rapidly and with a high degree of predictability," Connell says.

In the past, developers requiring predictability down to the millisecond — such as for a financial services firm's trading application — have avoided Java because of inherent latency related to the way the language handles memory management, he says. In WebLogic Real Time Edition, BEA has built a precise, predictable way of doing memory management that lets users make service-level guarantees required by time-sensitive environments. ■



# SERVICE PROVIDERS

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## It's a content conundrum

It's official — the Verizon/MCI and SBC/AT&T mergers have gotten final approvals from federal and state authorities. The next step, the joke goes, is for AT&T and Verizon to buy each other, thus reconstituting the original Ma Bell.

Not likely. The next new frontier, as many folks have noticed, has to do with redefining the relationship between content and carriers. Consumers are increasingly turning to the Internet for news, shopping and entertainment, as well as communications services. According to a recent study by Nielsen/NetRatings, one in four Internet users reads a newspaper online. And half of all U.S. Internet users obtain coverage of significant events such as Hurricane Katrina online, according to a new study by the Pew Internet and American Life Project. *USA Today* calls the Monday after Thanksgiving "cyber Monday" because of the high volume of online shoppers. As for entertainment — does anyone younger than 30 watch TV or listen to the radio these days, or are they downloading content (legally or otherwise) from the Web?

In response, telcos such as AT&T and Verizon are investing billions in the TV business, planning to go toe-to-toe with the cable companies to deliver a one-stop shop for communications, television and Internet services. Given such a focus, you might think the next logical merger would be between a carrier and a content provider.

There's just one catch. The telcos and the cable companies are missing the point, which is that 21st-century content is increasingly collaborative and distributed. As the Pew Internet and American Life Project recently documented, 57% of teens who use the Internet (that's about 12 million kids ages 12 to 17) are also content creators. They've created a blog or Web page, posted original artwork or photographs, written stories or produced videos, or remixed online content, including music. They're also TV watchers, iPod listeners and video-game players who instant-message their friends while chatting on cell phones. As Greg Kot, music critic for the *Chicago Tribune* notes, "They're used to having their entertainment now, not waiting for a corporation to serve it to them on its own carefully calibrated marketing schedule."

Bingo. If Verizon and AT&T are serious about getting into the entertainment business, they need to think about how best to leverage their assets (Internet backbones,

### EYE ON THE CARRIER

Johna Till Johnson



broadband access to consumers, world-class quality of service) so as to enable the kind of distributed content creation that's the hallmark of 21st-century communications. It's not about piping "content" to passive consumers (the old cable model). It's about delivering a framework that enables users to easily find, procure and create content on their own.

Part of that framework exists — it's called IP. What's missing is the next generation of search and indexing (something Google and Microsoft are both working on), as well as viable payment schemes.

If the telcos want to get serious about beating the cable companies at the content game, they'll need to think hard about how to enable 21st-century content creation.

*Johnson is president and chief research officer at Nemertes Research, an independent technology research firm. She can be reached at johna@nemertes.com.*

## Microsoft upgrades hosted service suite

BY ELIZABETH MONTALBANO,  
IDG NEWS SERVICE

Microsoft last week released an upgrade to its hosted messaging and collaboration suite that includes Exchange Server technology for pushing company e-mail seamlessly to Windows Mobile devices.

Microsoft Solution for Hosted Messaging and Collaboration 3.5, used by Microsoft service-provider partners to host e-mail and collaboration services for small-to-midsize businesses, includes Microsoft's Exchange, Windows SharePoint Services and Live Communications Server 2005.

The suite is available on a hosted basis to partners in Microsoft's Windows Hosted program along with technical support and guidelines for deployment. There are about

## Cingular, Orange team on cellular service

BY JOHN BLAU, IDG NEWS SERVICE

Two big mobile phone operators, one in the United States, the other in Europe, are teaming to offer tailored services to multinational companies operating on both sides of the Atlantic.

Orange SA has agreed to join the Cingular Wireless Worldview program, which provides multinationals with a one-stop sales contact, a Web-based portal to monitor key usage and billing data, and a volume discount plan.

"The key goal is to provide consolidated mobile services to a specific segment, which, in this case, is the multinational company," says Fabien Gustaffson, director of multinational company business development at Orange.

The move to coordinate sales to provide a single response to multinational companies "is clearly what users want," wrote Jeremy Green, a wireless analyst with Ovum, referring to the service.

Perhaps the most attractive component of the three-part service is the volume discount. With Orange on board, multinationals on the Cingular Digital Advantage (CDA) discount scheme can include their

usage on Orange's European network, with operations in 17 countries, to receive a larger discount.

"Companies that have been receiving, say, a 10% volume discount for their U.S. mobile communication usage can now add, for instance, another 5% for their usage on Orange's networks," says Derek Austin, marketing director for multinational customers at Orange. "For some companies, that can result in some significant savings."

One shortcoming: The discount plan benefits only Cingular customers on its CDA plan, and not Orange's multinational customers that spend money on mobile phone services in the United States.

"This is the first stage of this partnership, which will evolve," Austin says. "We'll be looking at this discount program moving forward."

The decision to join Worldview could be the beginning of a partnership that might lead to many other new services, Gustaffson says.

"Both of our networks are based on GSM technology," Gustaffson says. "So I certainly see some other opportunities where we can partner in the future."

Asked whether joint procurement could be one of them, he says it is not part of the current agreement but could be considered.

Whether a move to drop roaming fees between the two mobile operators could also become an option is unclear.

"Roaming is a valuable service and it has a price," Gustaffson says. "Cingular and Orange have roaming agreements today. What we do in the future is something else." ■

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# TECHNOLOGY UPDATE

AN INSIDE LOOK AT TECHNOLOGIES AND STANDARDS

## SAML 2.0 simplifies federation

BY PATRICK HARDING

Until this year, identity federation has suffered from the problem of too many standards. Companies that deployed federation before the fourth quarter were forced to deal with five incompatible protocols: OASIS Security Assertion Markup Language 1.0 and 1.1, Liberty Alliance ID-FF 1.1 and 1.2 and Shibboleth. The result was a complex matrix of enterprise and consumer use cases, protocols and implementations that slowed the growth and increased the cost of federation deployments.

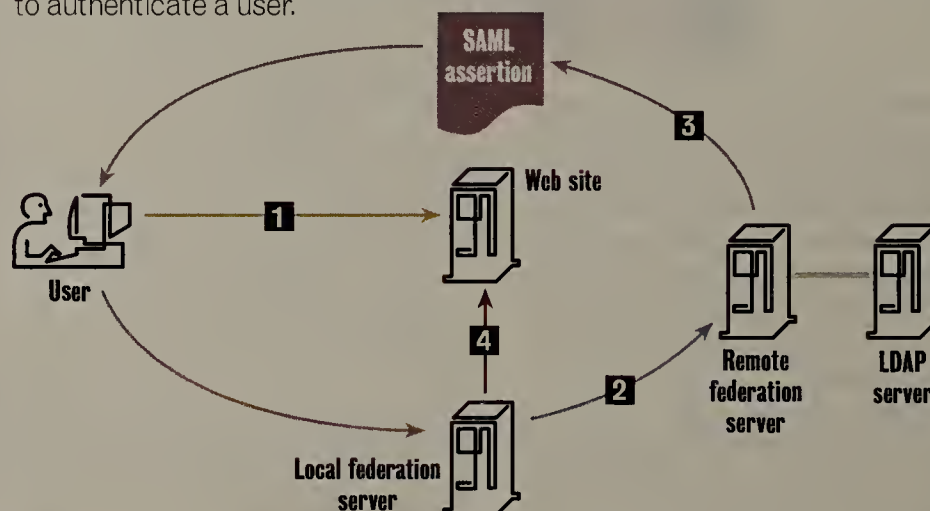
The Organization for the Advancement of Structured Information Standards (OASIS), the Liberty Alliance and Shibboleth have since joined forces to create a single standard that would make their previous work obsolete. The result is SAML 2.0, which OASIS ratified in March and is beginning to appear in vendor products. SAML 2.0 radically alters the federation landscape by removing the largest barrier to increased federation adoption: multiprotocol complexity.

OASIS, Liberty and Shibboleth originally came at federation from three perspectives: OASIS SAML focused primarily on business-to-business interactions (single sign-on between enterprises), Liberty focused on consumer (business-to-consumer) interactions requiring privacy, and Shibboleth focused on educational environments requiring anonymity. Hence, they modified and extended the original SAML 1.0 specification to support different uses. These federation protocols are interoperable or backward-compatible.

Before SAML 2.0, organizations looking to deploy federated identity had to negotiate

### HOW IT WORKS: SAML 2.0

The federation standard SAML 2.0 enables a Web site to allow another domain to authenticate a user.



- 1 A user attempts to access a Web site. Since the user has not been authenticated, the site redirects his browser to the local federation server.
- 2 The local federation server redirects the user to a remote federation server, which challenges his identity. The user provides his user name and password.
- 3 The remote federation server verifies the user against its Lightweight Directory Access Protocol (LDAP) server. If the user's credentials are verified, the remote federation server creates a SAML assertion, embeds it in his browser and redirects him back to the local federation server.
- 4 The local federation server extracts the SAML assertion and creates a session cookie for the Web site. The user's browser is redirected to the Web site.

protocol selection with each federation partner. Many had to support multiple protocols through protocol mapping and translation techniques that cause support gaps for key features or capabilities.

SAML 2.0 incorporates every critical-use case and feature from every predecessor

protocol into a single standard. As it represents a superset of all the functionality in all five predecessors, SAML 2.0 makes them obsolete.

SAML 2.0 describes two roles for enabling federation; the service provider is the entity that makes an application or resource avail-

able to the user, while the identity provider is responsible for authenticating the user. The service provider and the identity provider exchange messages to enable single sign-on and single log-out. These message exchanges can be initiated by the identity provider or the service provider.

For single sign-on, the identity provider is responsible for creating a SAML assertion that contains the identity of a user and then securely sends that assertion to the service provider. The service provider is responsible for validating the SAML assertion before letting the user access the application.

A SAML assertion is an XML document that contains many statements pertaining to the identity of the user. These statements include information about how a user was authenticated and, optionally, additional user attributes.

This exchange of messages can occur via different SAML bindings, such as using an HTTP form Post via the browser, or a Simple Object Application Protocol back-channel interaction.

The convergence of federation use cases within SAML 2.0 will have a major effect on companies wishing to use federation as a means of sharing identity-related information cross-boundary. It simplifies the selection of a protocol and eliminates the need to run overly complex, confusing and expensive-to-maintain multiprotocol solutions. Current deployments based on SAML 1.0 and 1.1 or Liberty ID-FF 1.1 and 1.2 will likely upgrade to SAML 2.0 in 2006.

*Harding is CTO for Ping Identity. He can be reached at pharding@pingidentity.com.*

### Ask Of Internet

By Steve Blass

**A few years ago you wrote about GhostScript-based PDF creation tools (www.networkworld.com, DocFinder: 1129). We haven't been successful with this and wonder whether there's an update or another open source option for creating PDF files on Windows systems.**

Open Office (www.openoffice.org) is an open source suite based on Sun's Star Office. It uses the OpenDocument formats approved by the Organization for the Advancement of Structured Information Standards. In

addition to providing an open source package that can read and write Microsoft Office document formats, Open Office includes the built-in ability to generate PDF files by choosing "Export as PDF" from the File menu. With Open Office you can create PDF files from documents, spreadsheets and presentation files.

The Export as PDF feature does an excellent job of generating PDF files that preserve the formatting of the original document. With Microsoft appearing to make more open its Office document-format specification to the European standards group ECMA International, we

may see a move toward open document standards that make moving between applications more reliable — even if the eventual standard is something other than the current OpenDocument or Microsoft formats.

Until then, the most reliable PDF creation results and access to the full set of PDF features are best provided by the full version of Adobe Acrobat.

*Blass is a network architect at Change@Work in Houston. He can be reached at dr.internet@changeatwork.com.*



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## GEARHEAD INSIDE THE NETWORK MACHINE

Mark Gibbs

# The insanely cool VMware Player

Last week we finished with a brief discussion of VMware's free VMware Player, which is essentially an amazingly useful run-time for virtual machines that runs under Windows and Linux.

As was noted in Gibbsblog a few weeks ago, when VMware Player was first released it wasn't "just for [VMware's] own VMs, but also for VMs created with Microsoft's VM environment, Virtual PC [and Virtual Server], as well as Symantec

LiveState Recovery disk formats." This is an insanely cool tool that others have described as a VM Acrobat Reader.

Installing VMware Player (VMP) is pretty simple under Windows, and we suspect equally easy under Linux. The VMP requires about 30M bytes of RAM, and most VMs will need about 200M bytes to run. (Linux will be very happy in that amount of memory, Windows less so if you get ambitious and try to run too many applications.) So, bank on at least 250M bytes of RAM for each VMP you run (you can allocate a maximum of 796M bytes). And, yes, you can run multiple copies of VMP simultaneously, but they are each separate instances — there's no common control console for all VMs as with the other VMware products.

An important consideration is that you can't have VMware's VMware Workstation installed on the same PC you use to run VMware Player. This is disappointing, but if

you're interested in doing such things, you'll probably be running two PCs on your desk anyway.

When you run VMP it asks you for a VM to run. If you have downloaded one of the VMware Virtual Machine Collection's preconfigured VMs (www.networkworld.com, DocFinder: 1132) it will have a "vmx" file extension. VMP also can open VMs stored in "vnc" files (Microsoft Virtual PC) and "sv21" files (Symantec LiveState).

## Installing VMware Player is pretty simple under Windows, and we suspect equally easy under Linux.

Note that VMP, at least in its current release, will run VMs created using the evaluation version of VMware Workstation, which seems a curious licensing loophole.

An interesting and useful VM to download and run, particularly if you want to get more experience with Linux, is the Browser Appliance, which consists of Ubuntu Linux, one of the coolest distros around, with Firefox pre-loaded.

<digression>Note that the Browser Appliance includes Firefox 1.07, but Firefox 1.5 has just been released. Firefox 1.5 is a big improvement if only because it can successfully run Google Maps! Performance is also improved; security is upgraded; an automated update feature is included; drag and drop tab reordering has been added; Mac OS X 10.2+ support is improved, including profile migration from Safari

and Mac Internet Explorer; and support has been added for SVG, CSS 2 and CSS 3, and JavaScript 1.6.</digression>

If you've used VMware Workstation you'll notice that the user interface for VMP is different; the player menu bar is much simpler than VMware Workstation's and only allows setting various options, changing the memory allocated to the VM, along with VM power-off and reset. (You have to shut down the operating system running in the VM if you want a clean operating system shutdown.)

The only major feature lacking in the VMware Player is a facility for taking a "snapshot" — that is, a copy of the running VM so it can be restarted from that point. That said, the Player recognizes snapshots in virtual machines saved to other VM management products, so with VMP you can power on a "snapshotted" VM from its saved state. You also will revert to the snapshot if the VM is configured to automatically revert upon power-off.

We had to do some searching to find out what the default root password for the Browser Appliance is. Given this is VMware's benchmark VM we should have guessed ... yep, you got it: vmware.

With the Browser Appliance VM just under 220M bytes and the VMware Player under 20M bytes, this could be an interesting opportunity to use a USB thumb drive to create an ultra-private browsing environment. We'll try setting this up and let you know how it works out.

*Tell us what tech toys you want for the holidays at gearhead@gibbs.com.*



## Cool Tools

Quick takes on high-tech toys. Keith Shaw

**The scoop:** Thump 2 (1G-byte version), about \$450, from Oakley (oakley.com).

**What it is:** The latest version of Oakley's digital music eyewear, the Thump 2 adds more memory (available in 256M-, 512M- or 1G-byte versions) and as much as six hours of playback time on a single battery charge. The earphones have been redesigned for a more comfortable fit, and the design of the sunglasses now allows you to flip them behind your ears and still hear the music.

**Why it's cool:** When I tried the first version of the Oakley Thump (www.networkworld.com, DocFinder: 1131), I had three complaints (comfort, non-prescription and no display). Comfort has been addressed — the ear booms now fit in your ears more comfortably than before. In fact, you don't have to insert them — you can position them outside your ears and still hear the music. Second, the sunglasses now are prescription-ready, so you can wear them while driving (with no music playing, of course). There's still no display to let you select what songs you want to hear (as an iPod or similar device does), so you play songs in the order that you transferred them from a PC or pick the random mode.

Is it worth \$450? That will buy you an iPod with a lot more memory and the ability to select the songs you want to listen to, but then you can't really go mountain biking or snowboarding with an iPod very comfortably. The Thump 2 isn't meant to compete with iPods as much as complement a fashionable digital music enthusiast. You also can spend less on the 256M-byte (\$300) or 512M-byte (\$350) models.



**The Oakley Thump 2 makes listening to music more fashionable.**

**Some caveats:** The system will support .M4A files created from Apple iTunes software, but it won't support the .M4P format that the iTunes Music Store uses. The system also supported Windows Media Audio formats, but we had to update our Windows Media Player software.

**Grade:** ★★★★★ (out of five)

**The scoop:** X-OOM MP3 Radio Recorder for iPod, about \$30, from X-OOM Software.

**What it is:** Software that records simultaneous streams of Internet radio stations to your PC. The software can record as many as six streams on a typical broadband line (DSL or cable), or as many as 20 on a dedicated Internet connection (although your IT department might visit you if you try this at work). Recordings are stored as individual MP3 files that can then be transferred to an iPod or other music player. Other features include an audio converter (convert from WAV to MP3 format), an ID3 Tag Editor and the ability to burn audio tracks directly to a CD.

**Why it's cool:** When I was 7, the easiest way for me to get music was to sit at the radio with my tape recorder and hit record. Thirty years later, this software does the same thing, but now I can choose from 6,000 worldwide Internet radio streams.

Recording simultaneous streams without having to listen to them while they stream also is nice — you can record a bunch of streams overnight and have a bunch of new songs to listen to in the morning. The user interface was extremely easy to use and understand, and I could add my own favorite Internet radio stations if I couldn't find them in the X-OOM list.

X-OOM says recording a public broadcast stream is OK, and the software works on the same premise as recording a television program with a VCR.

**Grade:** ★★★

*Shaw can be reached at kshaw@nww.com. The Cool Tools video spotlight this week features an interview with Oakley tech guru Colin Smith about the new line of Thump digital music sunglasses. Check it out at www.networkworld.com/video.*





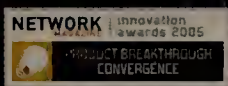
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a real-time Linux operating system that is secure and not vulnerable to attack. And,

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straight out of the box. To learn more about adding secure VoIP, access [www.zultys.com/nw](http://www.zultys.com/nw).



**ZULTYS**

VoIP vs. VoIQ



Two industry insiders debate the merits of two popular security technologies.

# FACE-OFF Is penetration testing more effective than vulnerability scanning?

## Yes

**Paul Paget**  
Core Security Technologies



**C**ompanies are struggling to keep up with a barrage of network security nightmares, including viruses, worms and hacker attacks. This makes it more difficult to protect core assets, such as sensitive personnel information, customers' credit card numbers and intellectual property. There are frequent reports of supposedly secure networks failing, resulting in lost revenue and damaged reputations.

To combat these increasing threats, network administrators must choose from a host of products, services and practices. Two common solutions are penetration testing and vulnerability scanning. These solutions are often lumped together, but there are significant differences between them. Vulnerability scans identify potential problems based on an evaluation of a network's defenses and known vulnerabilities. Penetration testing reveals more information about a network by actively attacking a system, probing all defenses and revealing real, not theoretical, vulnerabilities.

Both methods have an important role in testing network security. At Core Security Technologies, we recognize the importance of vulnerability scanning, use it in our consulting practice and partner with several companies that provide this technology. But while vulnerability scanning is a good first step, it shouldn't be considered the final step, because it doesn't answer the fundamental question, "Is my network secure?"

Vulnerability scanning does not address the implications of an intrusion, leaving network administrators to determine if a vulnerability is real or a false positive, if it can be exploited and what risk it poses to a network. Without determining the true threat to a network, administrators must devote resources to patching every vulnerability, often wasting significant time and effort patching systems that may not require it.

A penetration test is an authorized attempt to breach the security defenses of a system using the techniques of hackers, worms and viruses. With a penetration test, you exploit vulnerabilities in your network and try to replicate the kinds of access a hacker could achieve and identify which resources are exposed. The results go far beyond the data yielded by a vulnerability assessment. An administrator is able not only to quickly identify and prioritize real vulnerabilities but also to gain insight into the effectiveness of other security measures in place.

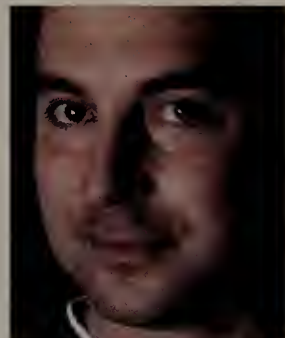
Some proponents of vulnerability scans say running a penetration test puts a network service at risk for downtime and using exploits could compromise the network's integrity. However, with a commercial-grade automated product, penetration testing can be conducted in a safe manner and poses less risk than most vulnerability scanners.

Vulnerability scanning is an excellent first step for a penetration test, but it's important to go further. Without running a penetration test, network administrators cannot be certain that their networks can withstand an attack. A penetration test can identify and eliminate real paths of attack.

*Paget is CEO of Core Security Technologies. He can be reached at paul.paget@coresecurity.com.*

## No

**Ron Gula**  
Tenable Network Security



**I**f your organization requires proof of each network vulnerability with a penetration test, then you are focusing on the wrong problem. With new vulnerabilities being disclosed daily, it should be assumed that all applications are exploitable. Modern networks should be focused on minimizing their attack surface, and vulnerability scanning is the best choice for this task.

Comparing penetration-testing tools with vulnerability-scanning tools is like comparing the effectiveness of regular trips to the dentist and X-rays of bicuspsids. Modern vulnerability-scanning tools test for thousands of known client and server vulnerabilities across hundreds of architectures. They do this with network scanning, host-based patch audits and network sniffing. Penetration-testing tools typically focus on testing hundreds of exploits to server vulnerabilities for a handful of architectures and operating systems.

These techniques have different levels of ease of use, false negative rates, false positive rates and effect on the network. However, for effective vulnerability management, relying solely on penetration testing is a bad idea. Vulnerability scanning is better suited to the task, for several reasons.

First, vulnerability scanning can be automated and made part of a network management system. Discovery of new hosts, applications and vulnerabilities can be fed into trouble-ticket systems to be addressed, whereas penetration testing is best performed manually by an experienced team.

Second, vulnerability scanning tests a larger number of vulnerabilities on more platforms than typical penetration-testing tools. Vulnerability scanning also takes into account security issues in printers, routers, wireless access points, firewalls and many other common network devices, whereas most penetration-testing tools do not.

Third, vulnerability scanning with continuous network monitoring or host-based patch auditing will easily identify vulnerabilities in client applications across a network. Some penetration-testing tools will test client applications, but these are normally used for local privilege escalation.

Finally, vulnerability scanning provides more fidelity of information. Our Nessus vulnerability scanner has close to 10,000 scripts, which detect missing security patches, installed software, listening services and vulnerabilities. Nessus performs exploit tests similar to those of penetration-testing tools but stops short of exercising the exploit.

Potential vulnerabilities are reported with a low, medium or high rating. This gives security teams more data to make informed decisions.

Do not take these arguments as reasons not to use penetration-testing tools. Every network-security practitioner should understand them and know how to use them, especially for auditing core servers. Penetration-testing tools can demonstrate a portion of the vulnerabilities requiring addressing, but an effective vulnerability-management strategy must make use of many vulnerability-scanning technologies.

*Gula is CEO of Tenable Network Security. He can be reached at rgula@tenable\_security.com.*

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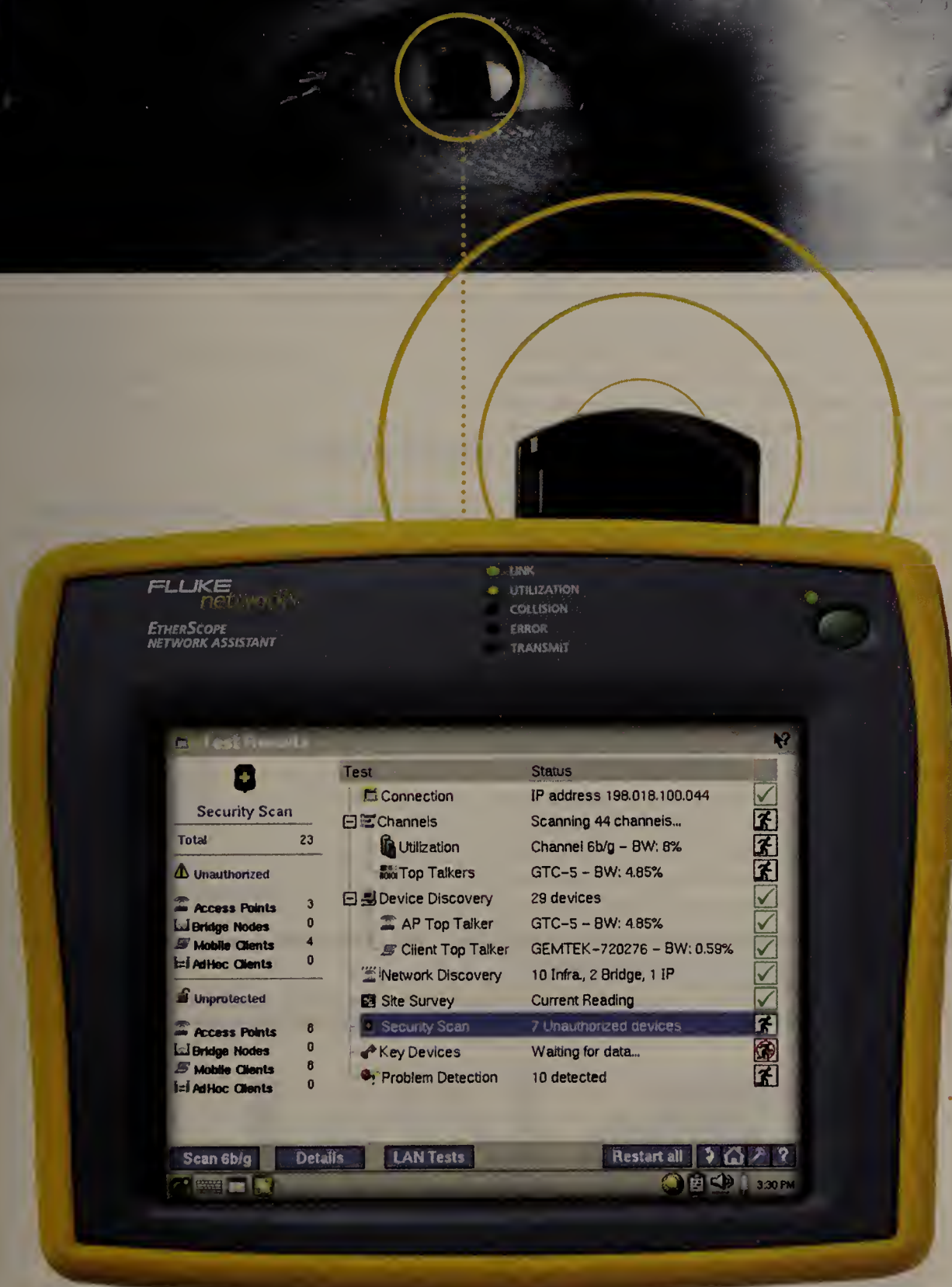
**Have your say**

Log on to *Network World* to express your opinion. Face-off authors Paul Paget and Ron Gula will add their thoughts to the discussion.

**DocFinder: 1128**



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On Technology  
Adam Gaffin

## When IT, politics in Mass. collide

In September, Massachusetts' Information Technology Division adopted a new "Enterprise Technical Reference Model" aimed at making it easier for state departments and the public to find and share information. It's a wide-reaching document that, among other things, commits the commonwealth to a service-oriented architecture (read story at [www.networkworld.com](http://www.networkworld.com), DocFinder: 1141). But what grabbed international attention was a provision that would ultimately require all electronic documents to be stored in Open Document Format, an XML-based specification developed by the Organization for the Advancement of Structured Information Standards.

One guess which vendor's desktop applications don't support ODF: Microsoft, naturally, went on the offensive, sending lobbyists to Boston to persuade the state Legislature to overturn this technology decision. State Sen. Mark Pacheco, who chairs a committee that oversees state agencies argued that adopting ODF would be "counter to what open source is all about" (read more at DocFinder: 1142).

But now things are getting really ugly. *The Boston Globe* recently reported that state officials are investigating whether Peter Quinn, the state CIO who oversaw the new plan, went to trade shows without authorization (he says he got an OK). The story hints at worse transgressions: "Even though a galaxy of computer companies are listed as sponsors of many of the conferences, Quinn did not list any of them on his authorization forms or the business relationships any of them have with the Commonwealth."

Clearly, somebody fed the *Globe* a line of baloney. Trade-show organizers solicit "sponsors," much like newspapers solicit advertisers. Accusing Quinn of wrongdoing for failing to note all the sponsors of a show would be like arguing that he should file a report for every copy of *The Wall Street Journal* he reads because network vendors advertise there.

One of Quinn's allegedly unauthorized trips was to a 2004 meeting of the National Association of State Chief Information Officers. The show was co-sponsored by Microsoft (see DocFinder: 1143). Does that mean Quinn might be secretly biased in favor of Microsoft? It's enough to make the head spin. It would be ironic if high-tech Massachusetts begins to have trouble filling top IT positions because nobody wants to work for a state that will treat them like human pinballs.

— Adam Gaffin  
Executive editor of NetworkWorld.com  
[agaffin@nww.com](mailto:agaffin@nww.com)

# Opinions

## Bank on authentication

Regarding Linda Musthaller's column "Banking on two-step authentication" ([www.networkworld.com](http://www.networkworld.com), DocFinder: 1121): I wish Musthaller had named the financial planning company she refers to; I would think it wouldn't mind being named if it really believes its claims.

This summer I visited my brokerage firm (Schwab) and asked why I should feel safe conducting electronic business with it. Naturally, I got the usual claims that it is all under control. I came prepared with news clippings of a long list of data breaches (ChoicePoint, Bank of America, Citibank) that have occurred since the beginning of the year. I showed them exactly what kind of two-factor authentication we use at my workplace. More importantly, I presented my account representative with an ad from a competitor (E\*Trade), which is offering account holders of at least \$50,000 the two-factor authentication device I was requesting. This was an implied threat that I'd move my business elsewhere unless Schwab was able to address my concerns.

Two months later I got a call saying Schwab is piloting a two-factor authentication solution internally. Now I'm lobbying to be one of their first non-employee users.

George Hsieh  
Fairfax, Va.

## Host with the most

Regarding "Web hosting costs soar" (DocFinder: 1122): I would have liked to see more analysis to explain a couple of counterintuitive factors. The first is that the compute power per watt is increasing, so we should be getting more performance per square foot even if the power and cooling requirements are increasing because of higher density. The second is

that the Internet is generally location-independent, so why can't data centers simply be located in places with lower costs? Especially when the carriers, some of which install and operate the high-capacity lines, are the ones building the data centers.

Roger Slykhouse  
Warren, Mich.

In a story on rising costs of Web hosting space in a few key markets, all of which are notorious for high real estate costs, I was surprised to see no discussion of building such centers in less-expensive areas. If corporations can move their back-office operations to India, why can't Web hosts move their facilities to, say, South Dakota? A server center does not require much on-site staff.

Dave Richter  
Systems development analyst  
Ford Motor Co.  
Bloomfield, Mich.

## Prevent pryware

Regarding Mark Gibbs' BackSpin column "Is Sony's CD DRM malware?" (DocFinder: 1123): The recent exposure of Sony's DRM "pryware" is another example of the downside of a megacorporation trying to insinuate its control over our private computing environments. Sony's use of rootkit-level cloaking type of software in its products is a clear intrusion and infringement into my personal privacy, bordering on criminal activity.

Robb Sauerhoff  
Associate director  
Gartner  
Bridgeport, Conn.

E-mail letters to [jdix@nww.com](mailto:jdix@nww.com) or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification.

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## Readers respond

Find out what readers are saying about these and other topics. DocFinder: 1030



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TV Dinner

Add your thoughts to the controversy in our online forum at [www.networkworld.com](http://www.networkworld.com), DocFinder: 1144.





**INFRASTRUCTURE  
INSIGHTS**  
Daniel Minoli

# ZigBee: What's in it for me?

**Z**igBee is a new technology being deployed for wireless sensor networks. A sensor network is an infrastructure composed of sensing, computing and communications elements that allows an administrator to monitor, observe and react to events and phenomena in a specified environment.

Sensor networks are seen as an important technology that is expected to be deployed widely in the next few years. For example, observers expect the number of ZigBee-compliant nodes to increase from fewer than 1 million today to 100 million in 2008.

Some sensor networks support highly distributed, large-node-count applications such as environmental monitoring and Homeland Security systems. Others support confined short-range spaces such as a home, factory, building or the human body. Short-range, low-data-rate wireless applications include RFID systems, light switches, fire and smoke detectors, thermostats and home appliances. The information collected is typically parametric in nature, where one transmits small volumes of simple data. But some systems also support low-bit-rate video and imaging algorithms. Node power and battery life are key design

considerations for sensor networks.

There are four basic components in a sensor network: an assembly of distributed or localized sensors; an interconnecting wireless network; a central point of information clustering; and a set of computing resources at a central point to handle data correlation, event trending, querying and data mining. In this context, the sensing and computation nodes are part of the network.

## ZigBee may well be for you.

For a number of years vendors have used proprietary technology for collecting performance data from sensors. In the early 2000s device suppliers researched ways to introduce standardization. For in-building applications, designers soon discounted Wi-Fi standards as being too complex and expensive; Bluetooth technology was also considered, but it too was found to be complex.

This opened the door for a new standard, ZigBee (the trademarked name of the IEEE 802.15.4). ZigBee operates in the 2.4-GHz Industrial, Scientific and Medical radio band, and

supports data transmission at rates up to 250K bit/sec at ranges up to 200 feet. ZigBee is expected to become a global specification for reliable, cost-effective, low-power wireless applications, providing interoperability and desirable radio frequency performance characteristics. Chip sets implementing the standard-specified protocol stack now are becoming available. Examples of ZigBee applications include lighting controls, automatic meter reading, wireless smoke and CO detectors, HVAC controls, home security, and medical sensing and monitoring. Sensor networks that operate outside a building and over a broad geographic area use any number of other radio technologies; for example, the new WiMAX standard (IEEE 802.16) and cellular 3G technologies also may be useful for metropolitan environments.

ZigBee may well be for you: There will be many opportunities for technology developers in this space in the next few years, as well as for system integrators and network engineers.

*Minoli is an adjunct professor in the Stevens Institute of Technology's graduate school and coauthor of a Wiley book on wireless sensor networks. He can be reached at minoli@att.net.*



**YANKEE INGENUITY**  
Howard Anderson

# Game over, start new game

**M**y last column (see [www.networkworld.com](http://www.networkworld.com), DocFinder: 1125) discussed the need for a line of technology products for those older than 50 ("curmudgeonware"). This time let's go to the opposite end of the spectrum and talk about what new-genre games are going to do for the communications industry.

In case Pong was the last game you played, let me tell you how important this segment is: big. Global game software is growing at 16% per year worldwide and is a \$15 billion business in the United States; 35% of U.S. cell phone users are playing games and the market is growing at 100% per year. In June, Viacom bought NeoPets, a site where users can adopt virtual pets, for \$160 million.

But what's more interesting is where games are going. Nintendo is coming with a new clicker that knows where you and your hands are — imagine boxing with Muhammad Ali or playing tennis with Steffi Graf. Now imagine that your kid can win points by boxing with another 10-year-old in a virtual Golden Gloves championship. The big issue: broadband. Broadband will do more for the game industry than narrowband did for eBay. Today your kid plays with a LeapFrog. Tomorrow — virtual leapfrog with Michael Jordan.

Now the advertisers want in. Want to play the next-generation version of Electronic Arts' "Madden Football"? Budweiser will have its signage on the scoreboard ... and pay for that. Want to ride the Tour de France on Lance Armstrong's team? His and your jerseys may carry an ad for the Discovery Channel. We are seeing the con-

vergence of games and physical activity. "Dance Dance Revolution" is now installed in 24-hour fitness gyms and has sold 3 million units. The advertisers even want to have different kinds of ads for different types of users.

Let's face it, the communications industry could use some steroid growth — cell phones have reached saturation, so what is going to drive up minutes of use? Games. What will developers come up with when virtually every home has broadband? Just like every time that Intel came up with a faster chip Microsoft found a way to use

## Imagine boxing with Muhammad Ali or playing tennis with Steffi Graf.

that power, game developers are jumping on broadband and using all that communications capability to totally involve you in games that are challenging, entertaining ... and addictive.

Where does all this go? Imagine a game that uses all your senses ... where you are totally involved and part of your status is your relative ranking. Imagine a game like Star Trek, where you take control of the Enterprise and your physical actions control the story. Do you win the laser sword fight? Then the action moves one way. Do you challenge Spock? Then the ending changes — except the game never ends. Instead of playing Rotisserie football, how would you like to be the starting quarterback for the New England Patriots

... where your quarterback score improves with your throwing expertise, where you had better learn the plays or you are going to be sacked.

I almost can't wait until the pornographers get hold of this. The early success of AOL was based on its explicit chat rooms. Now, fast forward to 2009 — where virtual reality and physical activity coincide. Don't laugh — many of the major revolutions in consumer behavior were driven by sexually explicit programming. Video rental stores, before Blockbuster, had a back room where you could rent X-rated videos. Once that market jump-started purchases of home VCRs, then the rest of the movie industry provided programming.

It costs up to \$10 million to develop a first-rate interactive game, but there is a whole category of casual games that will pop up. "Club Pogo" from Electronic Arts has 1 million paying subscribers. Games build loyalty and return customers. "Second Life" is free to play, but users buy and pay upkeep on virtual land ... and the game is entirely driven by user-generated content. It has users actually living off their game income, just like some eBay vendors.

The real and virtual worlds have collided. See you in cyberspace.

*Anderson is the founder of The Yankee Group and YankeeTek, and a cofounder of Battery Ventures. He lectures on technology at the Massachusetts Institute of Technology and speaks on technology subjects at meetings across the country. He can be reached at handerson@yankeetek.com.*



## FEATURE

# Under pressure

Inside the high-stress life of a chief information security officer.

BY SANDRA GITTLEN

He has commanded a war room at home in his pajamas, led a disaster response team from a Little League field and received an alert about the Zotob virus while sunning on a Cape Cod beach.

When you're the chief information security officer (CISO) at a large company, the pressure goes away and the pressure never lets up.

Photos taken by Steve Vote

AT&T's Ed Amoroso



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Ed Amoroso, the 43-year-old CISO at AT&T, has an even more challenging job than the average security pro. He not only has to protect AT&T's internal network from attack, he's also responsible for the service provider's global customer-facing network.

He's also trying to balance his always-on job with a busy family life. What does Amoroso do when the stress starts to build up? "I look at the ducks on the pond," he says, referring to the wildlife outside his office in Florham Park, N.J.

But it's rare to find Amoroso in his office. Instead, he is more likely to be running through an airport on his way to visit one of AT&T's global customers or meeting — often virtually — with his more than 300 far-flung team members who comprise AT&T's Security Center of Excellence.

"I spend 50% of my time with AT&T customers — although my team would say it's more like 100%," he jokes. "In order to set the security strategy for AT&T, I have to know what's going on in the world."

Amoroso is also devoted to spending time with his wife, Lee, and their three children. He often works from home one day a week to counterbalance his heavy travel schedule.

Amoroso says there are three parts to his position: setting the security strategy for AT&T's internal network, managing the security of AT&T's global network, and helping to create new security products and services for AT&T worldwide. As such, Amoroso leads a unique mix of researchers, network security managers and product designers who tackle internal and external security issues, such as real-time incident response, patch management, anti-virus processes, compliance, policy requirements and enforcement, and intrusion detection.

Ghossein Eslambolchi, AT&T's CTO and CIO at the time this article was reported, says having Amoroso head up both the internal and the customer-facing network and services is beneficial to the company. "We're able to leverage what we learn from protecting one of the world's leading global IP networks — our own — to benefit our enterprise customers."

Amoroso's Security Center of Excellence covers four areas: real-time security, enterprise security, design and development, and compliance and audit.

While many of his peers see their job as putting out fires, Amoroso, who was named to the CISO position in 1999, believes his role is more strategic. He says if he spent all his time in a war room fighting off every virus that popped up, he would be doing his job all wrong. For example, when the Zotob virus struck, he received a page while

vacationing in Falmouth, Mass., but his team handled the situation.

Though he's not a micromanager,

Amoroso does remain tethered to the information generated from his network. His main source of information is his BlackBerry, which he constantly fidgets with. It's set to alert him to changes in network conditions, virus outbreaks and other vital information. He relies heavily on the device, even making sure not to vacation outside its coverage areas.

"There are people in the organization who do have to

firefight and yes, Ed does get involved when

necessary. But it's important

that he address the issue of what strategies we use and what technologies we use to get ahead of the problem and stay ahead of it. That's the core of the CISO job," says Dave Belanger, chief research scientist at AT&T Labs.

"The CISO role is kind of a unique combination of technological and operational expertise, in the sense that there is an intelligent adversary and the CISO has to ensure that our technology evolves faster than the adversary's capability," he says.

Belanger says Amoroso works closely with the labs to "create systems that allow us to view in real time what's happening in our network faster than anyone else. Ed's folks have breakthroughs that allow us to detect the attack and deal with it. We view the relationship between the CISO and research as one that is essential in keeping us in the lead at the network and information layers."

### The early bird catches the worm

Each morning around 7, Amoroso, an early riser, receives an encrypted e-mail cyberintelli-

gence report from his team — which he immediately accesses from the road, home or office — that outlines the threat levels and global network-performance issues of the day. He can see spikes in usage and questions his team on their causes. For instance, a recent release of a Rolling Stones album across the network spawned an alert.

There are five levels of alerts, he says. Levels One to Three are handled by his team members, but Level Four has him jumping into the mix. "Level Four is wake me up and let's get folks on a conference call. It's usually a worm

that has managed to have impact on a major customer," he says. As for Level Five, he says that category is reserved for Sept. 11-type events.

When a Level Four alert does occur, Amoroso says his team creates a virtual war room using video and audio conferencing, a broadband connection and an extranet. "Our version of a war room is in your pajamas on the phone. These things rarely happen between 9 a.m. and 5 p.m.," he says. With his team members spread across the world, including Australia, Florida and Hawaii, he says, the virtual approach works better than everyone jumping on a plane or in their cars to get to a central location.

Bill O'Hern, division manager for Amoroso's network security division, handles real-time response issues; his team is embedded in AT&T's massive state-of-the-art global network operations center in Bedminster, N.J. This allows them to have up-to-the-minute knowledge of the entire AT&T network as well as access to other network specialists.

He says even though Amoroso — who dresses in business-casual and insists on the team calling him "Ed" — is very laid-back, there is a sense of urgency to their work.

Although many companies try to create a team atmosphere with extracurricular activities such as bowling leagues or softball teams, Amoroso focuses more on team-building around the actual work his team does. O'Hern says the real-time response group is on call 24/7 and works in shifts around the clock so its members don't spend time outside of work together.

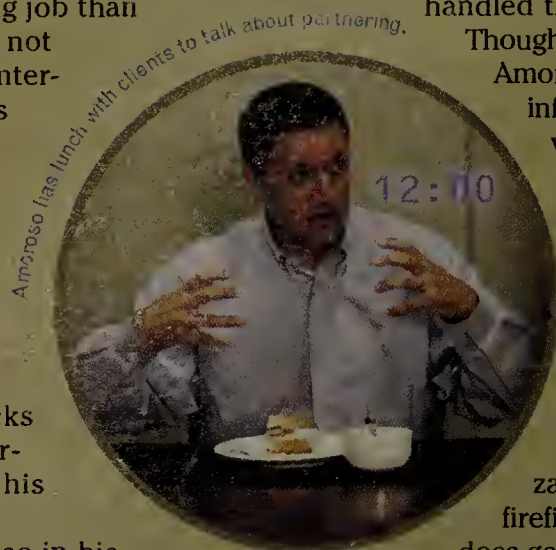
Amoroso and O'Hern admit home life can be challenging with such a demanding job. Amoroso, the father of two daughters and a son, says, "I've often led disaster responses from the Little League field. When a security event starts, wherever you are, that's where you are for the next few hours."

While such intensity could lead to burnout, O'Hern says Amoroso's team avoids it by seeing their efforts pay off as AT&T products and services. "There's also a taste of doing security in the big leagues and I wouldn't give that up."

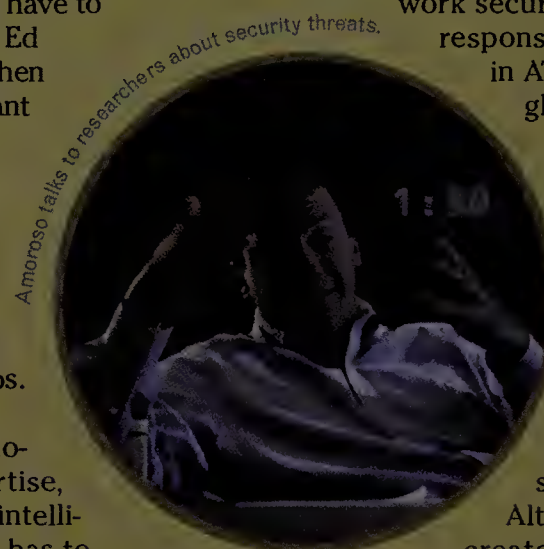
### Deep background

Amoroso has a deep background in computer science and information-security research. The 20-year AT&T veteran started his career at Bell Labs right out of graduate school, researching how to make the Unix platform secure.

He moved on to tackle high-profile government-contract security projects, including the trusted software development for the Strategic Defense Initiative and the White House Y2K Information Coordination Center. When he was appointed CISO, he continued a company tradition of researchers being moved out of the labs and into corporate executive positions.



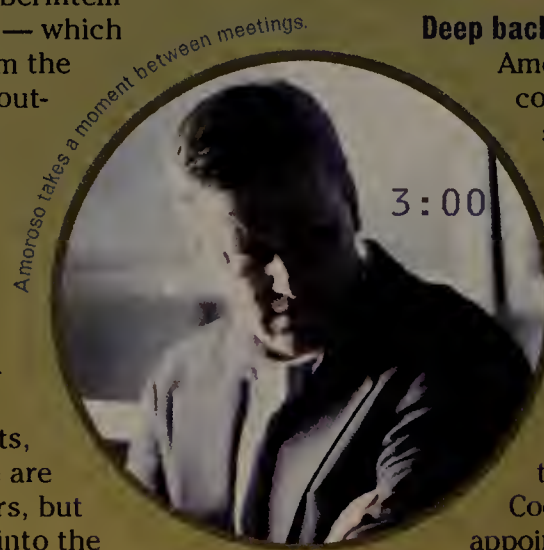
Amoroso has lunch with clients to talk about partnering.



Amoroso talks to researchers about security threats.




Amoroso watches a demo on research to combat VoIP denial-of-service attacks.



Amoroso takes a moment between meetings.





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Esfahani adds: "Ed is one of the best security experts in the world. He's been driving the technical security strategy defined by me. He is [also] great with customers and is one of the best salespeople we have. Security is very technical. Translating the technology so the customer can understand the issues is one of Ed's great strengths."



Amoroso also has strong opinions about the security industry and isn't shy about expressing himself.

"The past decade has been tough — the security industry has lost its way. At one point we had no security; now there's too much. This has been the era of security getting worse and worse," he says.

"Today there's too much software from vendors that needs to be patched. There are viruses and worms and spam and firewalls," he says, adding it's all too expensive for end users and IT managers to maintain.



And without a hint of subtlety he concludes, "carriers need to be doing security for the end-



points." While that seems like a self-serving position, it's one that leading security analysts agree with.

Amoroso also believes in the need for safe havens online. His large financial customers, such as banks and brokerage firms, are so worried about the liability involved in the increased number of phishing attacks targeting their users that they are threatening to move off the Internet.

"Phishing is at a fever pitch," he says, citing a swell from 800 complaints a month to AT&T's fraud and abuse center last year to more than 60,000 a month this year.

Rather than have major businesses retreat from the Internet, Amoroso says he hopes to gather the best companies and academic minds in the security industry to solve the problem. He has already started brainstorming with his partners, such as Cisco, and meets with them regularly to see what it would take to create a "safe net" where customers could do business without worrying about hacking or phishing.

In a meeting on this topic, Amoroso uses a whiteboard to sketch out a rudimentary drawing of his vision for a safe network for conducting business online. The initial iteration of his plan involves a network that's outside today's AT&T network and requires heavily authenticated access. He rattles off the pitfalls of requiring customers to use tokens (too cum-

bersome) or multiple passwords (too complicated). He encourages a group of corporate security executives who are in town to meet with him on a different topic to think about the issue and come back to him with ideas — hinting that if their ideas are good enough, they could be in on this revolution.

Amoroso's meetings with his business partners, customers and team members are casual but well-managed; they usually take place in half-hour increments and don't stray from a set agenda.

He doesn't carry a planner, saying they are too bulky. Instead, he jots reminders on the back of a piece of paper, making sure to enter important points in his journal at the end of the day.

As he moves between meetings, Amoroso chats with people in the hallway, sharing scores from the latest New York Giants game with an electrician.

#### In the limelight

Amoroso is a big draw on the speaking circuit and is often put in front of audiences to drum up support for high-profile AT&T initiatives.

His most recent project has him behind the scenes, however, playing executive producer for a tool that keeps customers up-to-date on security threats in real time. He likens it to CNN for IT managers and dubs it the "Internet Security News Network." As threats evolve, AT&T customers are paged to tune in to a Web portal for a streaming newscast, complete with anchors and experts, that is recorded at AT&T headquarters (in fact, a studio is being built for this broadcast). Along with the newscast, viewers are given links to resources that help them patch or otherwise address the vulnerability.

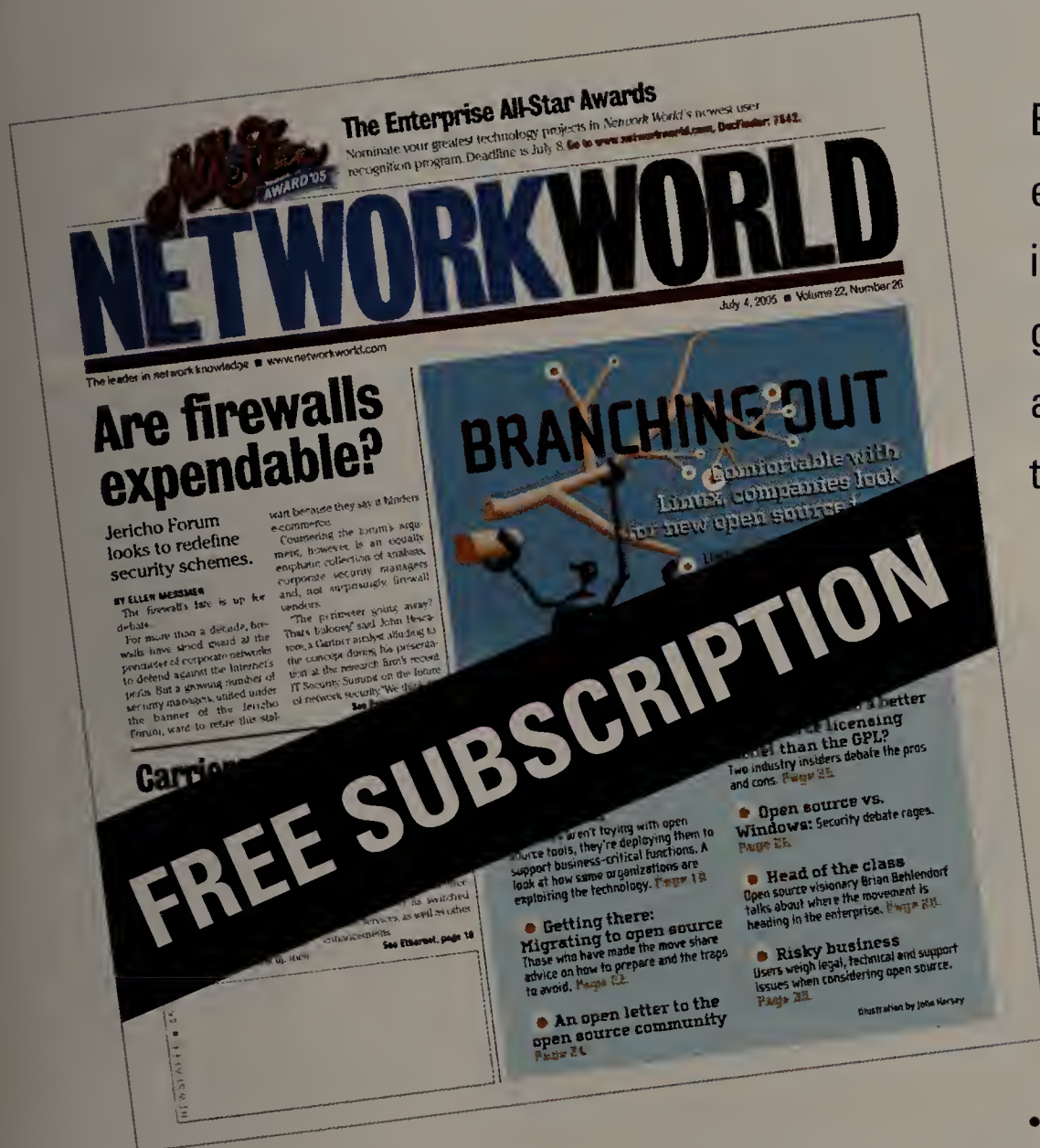
Amoroso teams with other AT&T units for many of his projects; this time the public relations team helped bring the tool to fruition.

Though it's only in pilot phase today,



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Amoroso says he hopes the project will go live as a service to all AT&T customers next year.

Amoroso is the perfect pitch man for these types of projects. His boyish enthusiasm and undisputed academic know-how are a forceful combination that make him an invaluable asset to the company.

When he's not meeting with customers and business partners, Amoroso spends time with his researchers and network managers, soaking up their expertise and expanding his own knowledge base.

For instance, a client had expressed concerns over the possibility of VoIP denial-of-service attacks. To get up to speed on this threat, Amoroso asked a lead researcher from AT&T Labs to prepare a private briefing that would explain the issue to him and show the solutions his team was developing. The

researcher delivered a PowerPoint presentation, fielding a barrage of questions from Amoroso, and then gave a live demonstration of how the attacks occur and how they are stopped.

Amoroso is the first to admit he has an insatiable thirst for knowledge, and he encourages the same in his team. Each week, the group holds tech talks, inviting subjectmatter experts from around the company to speak on a variety of topics. "If you meet every Friday for a year, there's a lot you can learn about the industry," he says.

Amoroso teaches a course on information security each Thursday at his graduate school, Stevens Institute of Technology in Hoboken, N.J. "I also read books voraciously," he says. Amoroso, who holds a master's degree and a doctorate in computer science, has written four books on information security. It's a passion he

shares with his father, Serafino Amoroso, another well-known holder of a doctorate in computer science.

"Like most IT guys, I work weekends and technology is my hobby, so I relax by writing and teaching about technology," he says. But he tries to balance that with his home life, which he relishes. It's a fine line, he says, as he heads out the door to get home and celebrate his 20th wedding anniversary before heading off that night to Washington, D.C., to meet with a customer.

#### Editor's Note

AT&T's merger with SBC was completed Nov. 18. Amoroso has a new title, vice president and chief security officer. He also has a new boss, John Stankey, senior executive vice president and CTO of AT&T Inc. His duties, however, remain essentially the same.

Belanger and O'Hern remain with AT&T. Eslambolchi is no longer with the company, according to AT&T.

*Gittlen is a freelance technology editor in Northboro, Mass. She can be reached at sgittlen@charter.net.*

**WWW.COM**

Go online to hear Ed Amoroso's thought-provoking presentation at the recent Vortex event in San Francisco on the future of network security.

**DocFinder: 1127**



## Profile: Ed Amoroso

### Favorite movie:

"The Godfather."

### Favorite book:

*How to Win Friends and Influence People* by Dale Carnegie.

### Favorite food:

Gary Null's vegetarian cooking.

### Mentor:

Edgar Dykstra, computer scientist: "Everything he said is the bible for information security."

### Education:

- Dickinson College in Carlisle, Pa., where he earned a bachelor's degree in physics.
- Stevens Institute of Technology in Hoboken, N.J., where he earned a master's degree and a doctorate in computer science.

### Fun facts:

- His father also holds a doctorate in computer science.
- His wife is a homeopathic expert.

### For fun:

Coaches his children's baseball and basketball teams; jogs.

### Author of:

- Intrusion Detection*, 1999.
- Fundamentals of Computer Security Technology*, 1994.
- PC Week Intranet and Internet Firewalls Strategies*, 1996.

A new book on cybersecurity, to be published.





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# CLEAR CHOICE TEST

## Juniper's chassis combines firewall, VPN and IPS

BY JOEL SNYDER, NETWORK WORLD LAB ALLIANCE

When Juniper shipped the Integrated Security Gateway 2000 late last year, the company said it was more than another low-density NetScreen firewall. In addition to the basic firewall and VPN capability built into the chassis, Juniper said the ISG 2000 could accommodate as many as three other blades providing security applications, such as intrusion prevention, without affecting the performance of the base firewall and VPN.

The blades came out in the spring, and we've been testing the ISG 2000 with three IDP (Juniper's intrusion-prevention product) blades on our live network for four months, focusing on hardware, management software and architecture.

Overall, while Juniper got the architecture of the system right, it's got some work to do in terms of maintaining hardware and management software.

### Hardware: Too hard

The ISG 2000 design doesn't fall in line with Juniper's long-standing reputation of producing maintainable hardware. While port cards, fan modules and power supplies are easy to replace, you cannot hot-swap interface cards. Additionally, getting to the IDP blades and the management module means pulling the chassis out of the rack,

unscrewing the top cover, and dealing with slots and boards that were not designed for easy maintenance.

The difficulty of maintaining this hardware was driven home in our tests when one of the blades stopped working properly. Juniper technical support was quick to diagnose the problem, but we had to pull the unit out of our network while we waited for a replacement part to arrive. Had the hardware been more maintainable, we could have quickly pulled the bad board and run on a reduced configuration.

### How we did it

**W**e installed the ISG 2000 with IDP blades into our production network at its very edge, connected directly to our two upstream routers. With two 45M bit/sec circuits coming into our network, we kept the ISG 2000 busy, but did not stress it. The hardware was specified to operate at speeds far above our load.

Throughout the test, the ISG 2000 ran on Version 5.0 of Juniper's ScreenOS operating system. The management system was more fluid. We upgraded an existing NetScreen-Security Manager management system to version 2004-IDP (and later to 2005.1 and 2005.2) and proceeded to push our standard firewall policy to the ISG 2000. Because the ISG 2000 was upstream of all our existing firewalls, we combined all of the other firewall policies into a super-policy, adjusted for network topology, and were running within a few hours.

With the ISG 2000, the firewall configuration drives data streams into the intrusion-prevention system (IPS) part of the product. For every firewall rule, you say whether the IPS is enabled. We started with IPS turned

on for all traffic, but simply alerting and not dropping or resetting connections.

After studying the false positives over a month, we refined our IPS policy to skip problematic systems and signatures.

Then we put the IPS into block mode, asking it to drop packets or reset connections that triggered its signatures. (A few days after we put the IDP into block mode we discovered one of our IDP boards had failed and was blocking traffic at random.)

For the next three months, we checked in on the management system daily, looking for log entries that might be signs of false positives, and updating and tuning the system. We used the logs several times to track down problems for our help desk. And of course, we had to make a number of changes to the firewall configuration.

During the testing, we worked with Juniper technical support to resolve questions and refine our understanding of the system. Juniper also provided on-site technical support at the end of the test to let us sanity-check our conclusions and to collect feedback.



Juniper's ISG 2000 chassis offers basic firewall and VPN services and can accommodate three additional blades running other security applications.

### SECURITY GATEWAYS

#### ISG 2000 WITH IDP BLADES

Juniper Networks

www.juniper.net/products/integrated-security-gateways

\$86,270 as tested. NetScreen-Security Manager software with five device licenses included.

**Pros:** Clean architecture and no performance problems up to 180M bit/sec; full-featured IPS with comprehensive signatures and good logging capabilities; outstanding firewall and VPN capabilities.

**Cons:** Management weak compared with other Juniper products; hardware not as maintainable as a high-end system should be.

We ran into another hardware-integration problem when we first tried to install the ISG 2000 in our network. Juniper's ScreenOS firewall software is running at either Version 5.2 or 5.3 in all current models — except for the ISG 2000, with Version 5.0. Unfortunately, 5.0 is missing a key feature allowing for asymmetric routing needed to install the ISG 2000 at the edge of a network with multiple ISP connections. Because of the versioning issue, we had to install additional switches to work around the unsupported topology.

### Software: Too soft

Management of the chassis with IDP blades installed requires Juniper's NetScreen-Security Manager, a client-server application for controlling the configuration of and analyzing logs from the ISG 2000. Although managing the firewall and VPN components from this application is stable, the NetScreen-Security Manager

doesn't control the IDP blade as well as the single-function management wares shipping with Juniper's stand-alone IPS boxes.


An intrusion-prevention system (IPS) requires frequent configuration to tune, tighten and reduce false positives. Operations that should be easy to do, such as adding an IPS signature to an exception list, require a significant number of steps, take you through a series of modal configuration dialogs and can be frustratingly unpredictable. Even with Juniper on-site, we couldn't figure out whether this unpredictable behavior was caused by bugs or some exceptionally subtle issue of how and where you click.

Simple tasks, such as finding a signature to learn more about it, are difficult to do. When we finally discovered (with the help of technical support) the well-hidden "find" function in the NetScreen-Security Manager GUI, we found a not-so-well-hidden bug: It doesn't find things very often. We were reduced to searching and scrolling through thousands of signatures to get the information we required.

We also expected to see more by way of integrated management across modules. In places where Juniper could have shared configuration between the firewall and IDP, it didn't. For example, although the firewall rules are used to say whether the IDP protects a stream, all details of the firewall rules are lost once you enter the IDP. If you want to customize your signatures for different firewall rules, you have to recreate the rules before you can pick and choose the signatures that apply.

See Juniper, page 58





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**Juniper**

continued from page 56

In all, we went through three released versions of the management software during our four-month test. It's hard to tell whether the problems we ran into with NetScreen-Security Manager are the result of a rushed design,

or just a buggy user interface that didn't work very well. In either case, Juniper doesn't meet its own standards for intrusion-prevention management tools with this release of the ISG 2000.

**Architecture: Just right**

If hardware and management software are the twin Achilles'

heels of the ISG 2000, Juniper gets extra credit for getting the hardest part right: the architecture. Merging a firewall and an IPS is not easy. We've seen products from a half-dozen vendors go through our labs with the dual moniker of firewall and IPS, and most of them were so badly integrated that the IPS function might as well have

been disabled. Not so with the ISG 2000. Juniper has done a good job of merging the two functions into a single system and giving the security manager sufficient control to make it all work — without putting so many knobs on the system that managing it is disproportionately burdensome.

Our months of letting the ISG

2000 protect our network ahead of all our other firewalls gave us hard-to-measure benefits. With any IPS, it's hard to say what didn't happen to you because you had an IPS in place. We had millions of attack events blocked, but it's impossible to say how many infections we didn't get because the IPS was in place. We were able to use the alerting system on the ISG 2000 to show us systems inside our networks already infected with spyware. Because the ISG 2000 was upstream of — and beefier than — all our other firewalls, it dramatically reduced the events coming from those firewalls, but that was also expected behavior.

The ISG 2000 is like a mostly baked cake (or to the turophile, an underaged Parmesan). If Juniper fixes the management system, this product will be a valuable addition to any network. At this stage, the ISG 2000 will appeal to those die-hards who are familiar with Juniper's IDP product line and are eager to better integrate their firewall and IPS functionality into a single system and single management console.

*Snyder is a senior partner at Opus One in Tucson, Ariz. He can be reached at Joel.Snyder@opus1.com.*

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# MANAGEMENT STRATEGIES

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## IT leaders go public

Seeking challenge, some go to government work from private sector.

BY JENNIFER MEARS

**A**rt Stephens began his career as a programmer at Accenture and worked his way up the ranks, eventually heading Deloitte Consulting's Harrisburg, Pa., office. But when an opportunity arose to stray from his successful, private-sector career path and move into the CIO position in the commonwealth of Pennsylvania, Stephens jumped at the chance.

As he climbed the corporate ladder, Stephens felt he was being dragged away from the IT consulting work he loved into a business administration role in which he dealt more with sales and personnel management than with networks and servers. He welcomed the chance to take on more technology-focused responsibility.

In addition, Stephens had a growing desire to give back.

"I took a very significant pay cut to make this change," says Stephens, who was appointed deputy secretary of IT by Gov. Edward Rendell in 2003 and became one of the governor's deputy chiefs of staff last June.

That type of altruism is the primary motivator for many IT professionals who have given up lucrative private-sector positions for public-sector responsibilities. While one would commonly think of people moving from the public sector into better-paying corporate jobs, there also is significant movement in the other direction.

Robert McFarland, who heads up IT in the Department of Veterans Affairs, spent his entire career in the private sector, including a long stint at Dell, before coming out of retirement last year to accept President George Bush's appointment to serve as the VA's assistant secretary for IT. Pennsylvania is just one of a handful of states, including Connecticut, Delaware, Indiana, Maryland and Massachusetts, that have private-sector professionals-turned-public-servants leading their IT divisions, according to the National Association of State CIOs.

"There are a couple stimulators that get people talking about working for...government. One is a sense of public service, not unlike a calling to be a priest," says Peter Metzger, vice chairman of executive search firm Christian & Timbers in Washington, D.C. "The other piece, which is of equal importance, is the enormous responsibility that one gets."

McFarland notes that there are 230,000 people working for the VA, with more than 6,000 IT employees and a \$2 billion IT budget. "No matter what I did in the private sector, there are very few places I could have been that would have been as large and as complex as this one," he says.

Peter Quinn, CIO of the commonwealth of Massachusetts, agrees, saying that IT pro-

fessionals likely will find more diversity in the type of projects they lead in the public sector, simply because of government's broader focus. "You deal with everything from state police to jails to collecting taxes to welfare, the whole gamut of services," says Quinn, who was CIO of Boston Financial Services before accepting the Massachusetts CIO position in 2002. "You get to work at the courts, legislature — the variety of the job becomes very compelling."

Getting projects completed, however, can be frustrating, because government CIOs have several approval levels to get through before an IT project can be launched. "The aspects of politics are completely different than in the private sector," the VA's McFarland says. "The private sector may have something it calls corporate politics, but [that's] minuscule compared to the politics associated with working for government."

Stephens says there is significant turnover among his state CIO peers. One reason is that IT is taking on a higher profile in today's digital world, and state and federal IT executives are more often under the microscope. "Legislators want to know [what we're doing], voters want to know, the media want to know," Stephens says. "It's definitely a challenge to balance that and keep the lights running."

Despite the political pressure and the wider variety of project goals, in the end public-sector IT leaders still are charged with the same mandates as their private-sector peers: provide the best, most efficient use of IT resources. McFarland is in the process of centralizing and consolidating a dispersed Microsoft Exchange environment. Stephens streamlined project proposals shortly after he took the helm in Pennsylvania, requiring that each agency prioritize IT budget requests before submitting them to the Budget Office and the governor, with the hope of eliminating duplication across state agencies.

"That's one of the misconceptions [about public-sector IT], that government is old-school technology," Stephens says. "It's just not true." Another misconception is that government IT work is easier than in the private sector. Public IT officials advise private-sector professionals considering a move to think carefully and be sure that financial compensation will not be an issue.

"I must be honest with you and tell that a move from the private sector to government is not for the faint of heart," McFarland says. "It's a very stressful move — a difficult transition and a big challenge."

Metzger advises clients that it will take them at least three years to learn how government works.

As for compensation, consider that top pay for IT in the federal government is about \$145,000, while a comparable position in the private sector would pay nearly a half

million dollars plus stock options and bonuses, Metzger says. "What I tell people when they ask about compensation packages is that a large part of the compensation [in the public sector] is going to be the psychological reward, the satisfaction of knowing what you're doing is benefiting society," he says. "It's a nice way of saying, 'You're not going to like it.'"

At the same time, those willing to make the financial sacrifice will find they are in higher demand should they decide to return to corporate life, Metzger says. "They're exponentially more employable and more desirable than they were before they were in government, particularly for a company who targets government as a customer," he says.





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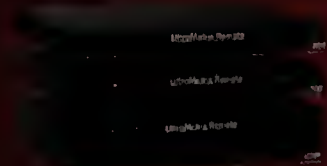


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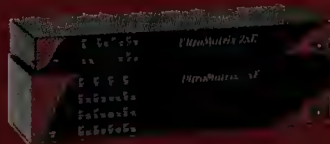
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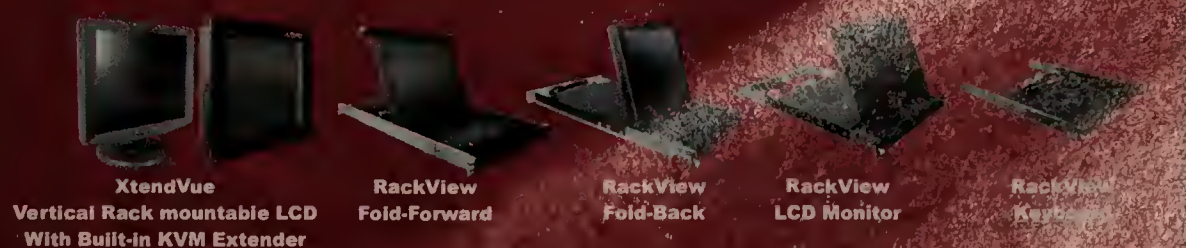
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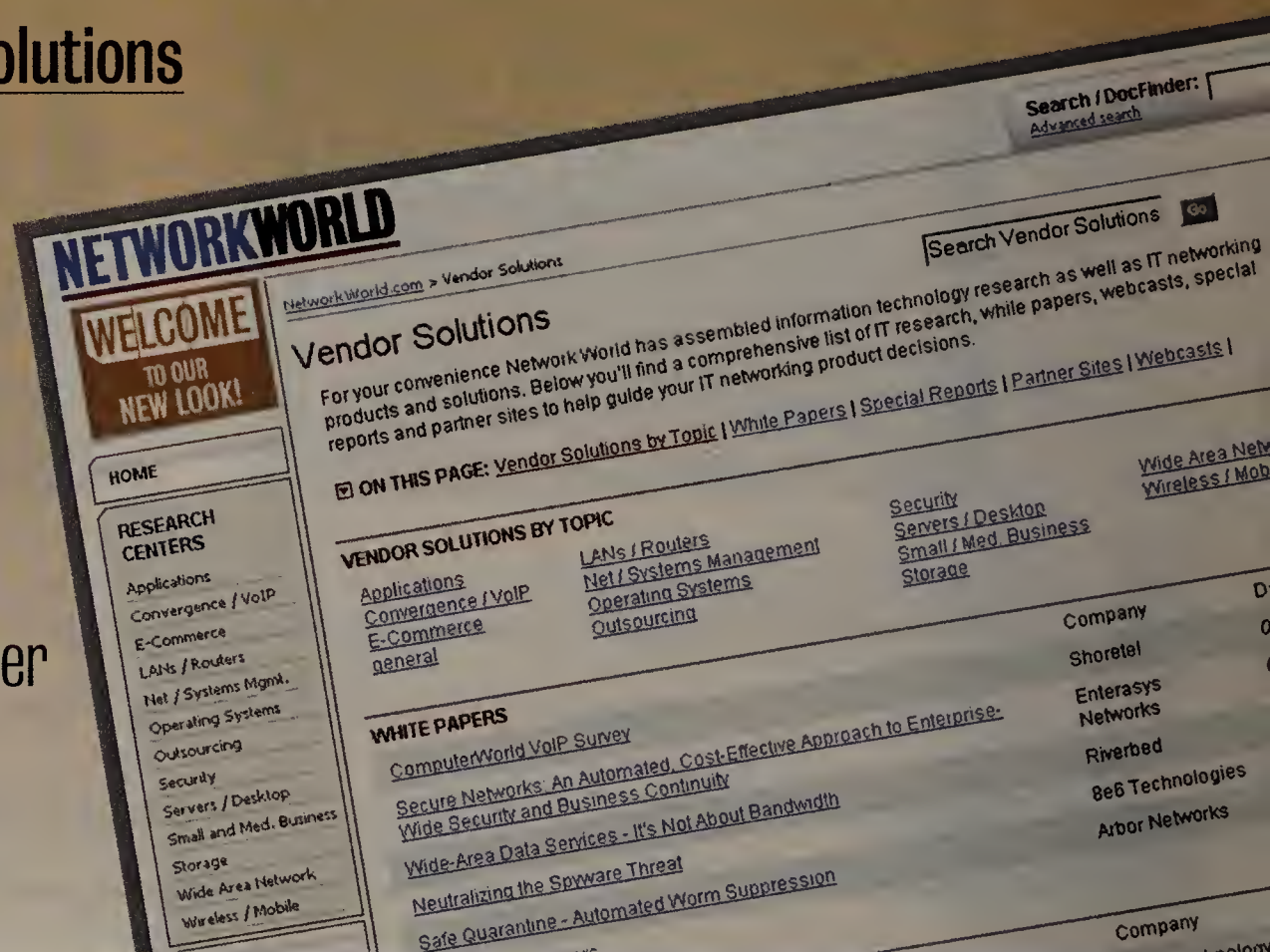




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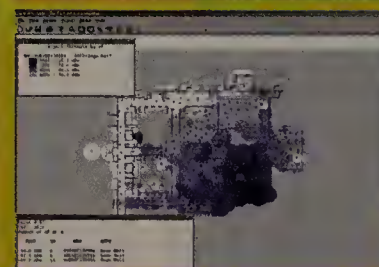
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# NETWORKWORLD

## ■ Editorial Index

■ A  
Amberpoint 12  
AT&T 39, 48, 50, 52, 54  
Avaya 23

■ B  
BEA Systems 38  
BlueNote Networks 14

■ C  
Check Point 23  
Cingular 39  
Cisco 6  
Colligo Networks 33  
CommonTime 33  
CommuniGate 33  
Corente 68

■ D  
Dell 20

■ E  
Egenera 14  
EMC 33  
Enigmatic 68

■ F  
F5 1, 16  
Forum Systems 12  
E-Secure 6  
FullArmor 12

■ G  
Gluecode Software 38  
Google 30  
Gordano 33  
GT Software 12

■ H  
HP 1, 16, 20

■ I  
IBM 1, 20, 33, 34, 38  
iConclude 68  
Imperva 1

■ J  
JBoss 38  
Juniper Networks 56

■ K  
Kalido 14  
Kavado 16

■ L  
LiveVault 6

■ M  
MagniFier 16  
MessageGate 14  
MetaMatrix 33  
Microsoft 12, 33, 34, 39  
Mindreef 12  
Mirapoint 33  
Motorola 20

■ N  
NetContinuum 1  
Netgear 23  
Network Appliance 33  
Network Chemistry 8  
Nokia 30  
Nortel 6  
Northrop Grumman 26

■ O  
Opalis 68  
Opsware 68  
Optinuity 68  
Oracle 38  
Orange SA 39

■ P  
Pronto 6  
Protegrity 1, 16

■ Q  
QAM 31  
Quintana 16

■ R  
Radware 23  
RealOps 68  
Research in Motion 8  
Rockliffe 33  
ROMmon 6

■ S  
SAP 33  
SBC 54  
Scalix 33  
Sendmail 33  
SOA Software 12, 14  
SolarMetric 38  
Sun 10, 34, 38  
Symantec 33  
Symbol Technologies 23

■ T  
Teros 16  
Tropos 6  
TrueBaseline 14

■ V  
Verizon 39  
VMware 30  
V-Secure 23

■ W  
WatchFire 16

■ X  
XenSource 30

■ Z  
Zenprise 68

## ■ Advertiser Index

Advertiser	Page #	URL
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## Automation

continued from page 1

collects, correlates and delivers data from multiple systems into one Web-based dashboard for analysis and reporting (see related story, page 16).

The automation push isn't limited to big management vendors. Companies such as Enigmatic, Opsware and Opalis, which recently landed another \$8.5 million in venture funding, promise to bring more intelligence to automation with cross-platform software designed to take the work out of such tasks as provisioning resources and collecting asset information.

Start-ups such as Corente, iConclude, RealOps and Optinuity emerged in the past two years with tools to help customers automate operational workflows, roll out applications to servers and fix known performance errors — freeing IT staff from redundant daily tasks.

"IT has done a terrific job of automating processes around developing software, but the opposite is true when it comes to automation in operations and production environments," says Jean-Pierre Garbani, a vice president with Forrester Research. "Companies can start to automate with daily tasks, and vendors are starting to deliver some tools to help in that area."

Bill Homa, senior vice president and CIO for Hannaford supermarkets in Scarborough, Maine, uses automation to balance

workloads among virtualized server pools and allocate bandwidth to higher-priority traffic on the company's corporate WAN. Homa, who uses products from IBM, Cisco and other vendors, says the process of automating data center operations started some five years ago and significantly eased the more-recent initiative to virtualize servers in two corporate data centers.

"You can't decide you are going to be automated and virtualized tomorrow and have it happen just like that," Homa says. "You need to have a foundation in place, such as an enterprise scheduler, a way to coordinate jobs and a way to move data between systems."

For others, automation is focused on a specific area of data center operations. Lenny Monsour says SunGard's project to automate asset and change management about two years ago enabled the company to become ISO 9001 compliant. SunGard, a provider of software and processing solutions in Durham, N.C., had already been working to document and then align its asset- and change-management processes with the Information Technology Infrastructure Library (ITIL), but by being able to automate the processes with Opsware software, the company also achieved ISO compliance.

"By automating our change-management processes, the demand on our time and resources has dropped significantly," Monsour, product management direc-

## Look Ma, no hands!

More companies are reaping the rewards of automation capabilities, but the technology still needs to evolve to reach the nirvana of utility computing. For instance, today:

Most management software needs network managers to customize known "if, then" scenarios in which to enable the software to take automated action.

Vendors have yet to build the software with enough intelligence to respond to changing, unknown conditions that occur in data centers.

Network managers in some cases have to manually update the infrastructure and application components in an inventory within the software to maintain accurate data.

Business processes need to be sorted to automate tasks across IT silos, such as storage, applications and networks.

There are still some areas of network management, such as security and troubleshooting, in which automation cannot replace human expertise.

tor at SunGard, says. "But the unexpected benefit was around access controls and security, compliance and data quality. In the past, manually collecting this data, we really couldn't trust its accuracy."

Despite advances in the technology, automation initiatives can stall when tasks require software to understand and act on more than a static set of criteria.

"At this point, there isn't a clear concept of what applications are doing in the production environment so that cannot be represented as a workflow model, which could be incorporated into automation software," Forrester's Garbani says. "In many cases, to really be able to take automated action with application performance requires you to incorporate automation into the entire life cycle of the application."

Garbani points to Microsoft's Dynamic Systems Initiative (DSI) and IBM's Rational software division as two product areas in which vendors could potentially break down the barriers between automating simple tasks and tackling complex data center applications. He explains DSI builds state models within its applications during the development stage. The state models — which can show network managers what an application is doing and set performance expectations — can be incorporated into automation software, he says.

Start-up Zenprise, which markets a Microsoft Exchange management product, incorporated into its software volumes of common scenarios, performance expectations, potential problems and known fixes. Zenprise 1.0 identifies the Exchange infrastructure

components, collects critical parameters and monitors them to determine if performance is meeting expectations. The software uses information on Exchange gathered from Microsoft and matches the symptoms it spots in performance against known problems, Garbani says.

"This type of automation would work well with any packaged application such as SAP, Siebel or Oracle," he says.

But given that most enterprise IT shops have a mix of home-grown proprietary applications and packaged applications that have been customized to run on their systems, pre-packaged automation tools fall short, says George Hamilton, a senior analyst with The Yankee Group.

Today's automation cannot learn on its own how to respond to myriad situations in a data center. The most-advanced tools still require managers to input their knowledge of the network, its

applications and known fixes to known problems, Hamilton says.

"Automation is great to reduce manual labor, but this type of operational automation isn't the same as what IBM and HP are promising. The Holy Grail of these vendors' plans is intelligent software taking action without human intervention," he says. "Automation is hindered by two things: not enough intelligence in the technology and a still skeptical user community."

Robert Green, senior systems programmer at Fidelity Information Services in Little Rock, Ark., uses IBM Tivoli Monitoring software to perform such tasks as system health monitoring, capacity and performance trending, and application monitoring. He uses automated capabilities in the software to take recovery steps, such as restarting processes on a server or clearing files. He admits he hasn't explored all the automation options within the Tivoli software, partly because there isn't a demand from other IT divisions in his company.

"I have to make sure the server support staff is comfortable with the automation I enable the software to take," Green says. "I would automate everything if I could, and they are coming to me more to turn the automation on, but some worry the envelope could be pushed open too soon." ■

## GPL

continued from page 10

do so," Brown says of software developers. "We're pretty confident that the improvements we've made to the license will encourage [developers] to make the switch."

The issue of compatibility among GPL and other open source licenses can affect developers as well as users. Vendors, resellers and systems integrators use various chunks of open source code — Linux, Apache, MySQL and PHP is a common open source stack — to deliver products. But if chunks of code are combined with others whose licenses do not allow for such mixing, sellers of these systems, and even users, could find trouble.

The climate of increased government regulations and scrutiny over corporate processes and systems should bring the issues of open source software licensing to mind for network executives, one analyst says.

For example, if an organization's financial operations are audited, "they might have to say where each and every piece of that software came from, how it's being used," says Daniel Kusnetzky, vice president of system software research for IDC. "If a company doesn't know where it all comes from and under what licenses they're using it, that could be kind of frightening for the executives who have to sign on the dotted line." ■

## NETWORK MANAGEMENT

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## BACKSPIN Mark Gibbs

# Putting lipstick on the Internet porno-pig

**B**efore I begin this week's tirade, allow me to point out that the Sony BMG fiasco keeps getting better. Sony has

been accused of fraud, false advertising, trespass, violations of state and federal statutes prohibiting malware, and unauthorized computer tampering. Now it appears that the company also has violated software copyrights as well as the Digital Millennium Copyright Act!

Want more? Sony BMG knew way in advance of the snafu being made public that its digital rights management software was considered spyware! I couldn't make this stuff up! See Gibbsblog for more details of things Sony-snafu-ish.

Finally, you can hear me opine about the Sony BMG fiasco on Ed Horrell's "Talk About Service" show ([www.edhorrell.com/advocates/featured.shtml#](http://www.edhorrell.com/advocates/featured.shtml#)).

So, what other than Sony is on my mind this week? Well, the thing that has attracted my attention is the CP80 Internet Channels Initiative, which, let me say upfront, is the technological equivalent of putting lipstick on a pig.

CP80's concern is pornography: They see the 'Net as a veritable cyclone of perversity that threatens the very fabric of American society. The chaps pushing this initiative are from an outfit named ThinkAtomic, which is de-

scribed as a "high-tech think tank" and is based in Orem, Utah.

The idea behind CP80 (which originally stood for Clean Port 80) is this: There are 65,536 possible ports (essentially communication endpoints for data exchanges using IP), and they should be treated as television channels.

In CP80's alternate universe there would be a channel for clean general content — presumably Port 80 — and another for porn — Port 666, perhaps? There presumably would be yet more channels dedicated to content that other groups think should be controlled. (Gee, d'ya think that politics might get involved?)

The pitch is that defining what content is available on what channel — and having strict laws that punish those who use channels improperly — would make filtering easy.

CP80 expert Jill Manning, a marriage and family therapist in Orem, recently testified before the Senate Judiciary Subcommittee on the Constitution. She discussed the "negative effects of Internet pornography on marriages and families" and called the CP80 proposal "a fresh, thinking-outside-the-box solution that we desperately need."

Among those on board are Sen. Bob Bennett (R-Utah), as well as state Reps. Chris Cannon (R-Utah), Jim Matheson (D-Utah) and Rob Bishop (R-Utah), all well-known technocrats and defenders of our constitutional rights. Also on board is, no surprise, Sen. Orrin Hatch (R-

Utah). That's the same great philosophical thinker and upholder of rights who espoused the view that technology be developed to destroy the computers of people who illegally download music.

CP80 plays directly into the agendas of those whose political ambitions require the public to toe the line. CP80's FAQ reads, "We expect their [sic] to be a government agency that is responsible for the upkeep of the standards and fighting any violators of the law."

Upkeep of standards. Hum. Standards. What could possibly go wrong with that idea? Where in this brave new world would the text of Nabokov's *Lolita* fit? How about the movie? Most important, who would decide?

If anything, the CP80 scheme is far less practical technically and legally than, for example, the Platform for Internet Content Selection, a far more sophisticated content-rating system that unfortunately didn't get as much attention as it deserved.

In particular, the reliance on law to constrain content is a nightmarish prospect because, if we can't effectively define pornography in the real world, why would new laws for controlled Internet channels make things any better?

No amount of lipstick can make this pig good-looking.

*Write to [backspin@gibbs.com](mailto:backspin@gibbs.com) on any channel.*



## NETBUZZ News, insights and oddities

# You say you can smell phish in your in-box?

**Paul McNamara**

Discovering that your online street smarts aren't up to snuff has got to sting, yet more than a half-million individuals have unflinchingly summoned the courage

to take MailFrontier's Phishing IQ Test since July 2004. Test takers are asked to scan 10 real-life e-mail messages and judge whether each is a phishing attempt or legitimate commercial correspondence.

Because we thrive on danger in the news profession, I made two decisions last week: I'd take the test myself; and I'd reveal the results here no matter how abysmal my score. (You'll simply have to trust me on the pledge and the grade.)

Those up to the challenge can access the test through [www.networkworld.com](http://www.networkworld.com), DocFinder 1140, but don't forget to come back.

Before we find out if everyone gets to have a good laugh at my expense, let's take a look at how the masses have been doing on the test. It's a mixed report card that says plenty about the obstacles being faced today by honest companies that want to connect to their customers via e-mail.

"The first 50,000 people who took the test were terrible at identifying the fraudulent e-mail," says Andy Klein, manager of the MailFrontier Threat Center. That group was able to sniff out just north of 60% of the stinky e-mail, meaning that about four of every 10 phishing lures in this mock exercise were gobbled hook, line and credit card number.

"The results have been getting better over time," Klein says, with the company's most recent analysis showing an 82% accuracy rate for spotting phishing attempts.

What's driving the improvement? Growing public awareness of the telltale signs of phishing and greater diligence on the part of legitimate businesses in educating their customers about their standard do's and don'ts regarding e-mail. "A little bit of knowledge and common sense go a long way," Klein says.

But the news is far from all rosy. Although people have gotten better at shooting phish in a barrel, that higher success rate has produced collateral damage: A lot

more legitimate e-mail is getting tagged as fraudulent. Whereas the early test takers correctly identified about 75% of legit e-mail, that rate is now down to about 50%, according to Klein.

In other words, people are pretty much guessing.

"The natural reaction is to back away and assume everything is bad," Klein says. It's an instinct that online merchants and security vendors are going to need to combat fiercely and effectively, lest it threaten the continued growth of Internet commerce.

OK, how'd I do on the test?

### RECENTLY IN NET BUZZ

McNamara's online archive: [www.networkworld.com](http://www.networkworld.com), DocFinder: 1031

- How the 'Net slows snail-mail (Nov. 28)
- Get paid for your IM time (Nov. 21)
- Escaping automated phone hell (Nov. 14)

Not bad, if I must say so myself: nine out of 10 correct, including nailing all five of the fraudulent e-mails. Only 4% of those taking the test manage to score a perfect 10 for 10, according to Klein.

(If you plan to take the test yourself, skip the next paragraph because it gives away one of the answers.)

My lone mistake was sensing danger where apparently none existed in an invitation from a credit card company to save big bucks by consolidating my high-interest balances on other cards into a single account with them. The pitch seemed just a tad too breathless, especially considering the value — to a phisher — of

what they were asking me to hand over. Erring on the side of caution and all.

Although it never occurred to me to plead my case on that incorrect answer, it has indeed occurred to others.

"We do get these folks who disagree with the answers — and they usually have good reasons," Klein says. Alas, the decisions of the judges are final, but you can rest assured that these test results will not become part of your permanent record.

*Want to brag about acing the test? The address is [buzz@nww.com](mailto:buzz@nww.com).*



# WE EAT WORMS FOR MONEY.

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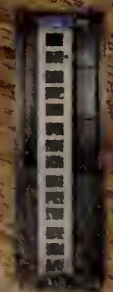


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